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Original Articles.

DISEASES WHOSE CAUSAL MICROBES ARE KNOWN.

BY E. P. HURD, M.D.

There has been a growing belief the past twenty-five years in the microbiotic origin of all infectious diseases. The studies of Pasteur on fermentations gave a strong impulse in this direction. Then, again, it was early known that certain diseases of plants and animals which have all the characters of infectious epidemics, are caused by microorganisms—*e. g.*, the smut of wheat, the grapevine disease, the potato rust. Insects were known to be subject to the depredations of fungi which caused in them diseases of an infectious kind. The *Empusa muscæ* causes ravages among flies, and is communicable from one to another; the *muscardine* and *pebrine* are fungous diseases of the silk-worm which have at times threatened to destroy the silk-worm industry of France. Nothing can be more interesting to the naturalist and physician than the chapter in the life of Pasteur, by his son-in-law, where are detailed the experiments of this savant in the ætiology and prevention of pebrine, a disease from which the sericulture of France is now practically free, owing to Pasteur's labors.

The analogical argument from which the conclusion is drawn that all the infectious diseases are due to a living ferment, is very strong. In its application to man, this argument presents itself under two aspects:

1. All fermentations owe their efficient causation to micro-organisms. 2. The specific febrile diseases of man are of the nature of fermentations. 3. Therefore they are of microbic origin.

The other aspect is the following:

The epidemic and contagious diseases of plants and the lower animals are of parasitic origin. The general laws of these epidemics are the same as those which characterize human zymotic diseases. Our belief in the uniformity of Nature would lead us to infer that they must have a like causation.

It cannot, however, be too much insisted on that medical truths are not determined by the deliverances of reason, but by inductive demonstration. The specific bacterium must be found, and its causal relation to the disease in question proved. Simple concomitance is not enough, for bacteria may attend diseases, as birds of prey do armies, to batten on the spoil. The specific micro-organism must be isolated, cultivated out of the body, and from the product of remote generations of this culture, healthy animals or men must be inoculated and the disease reproduced in all its distinctive characters. Moreover, for each specific disease the problem of causation must be worked out independently. It will be well to take a retrospective view of what has been really accomplished toward establishing the ætiology of infectious diseases, asking ourselves what diseases are now known to be microbic, and what are the pathogenic agents. We shall limit ourselves to those whose microbiotic origin seems to be established on sufficient scientific basis.

Leaving to one side such bacterial diseases of the lower animals as chicken cholera, the contagious acne of horses, contagious pneumo-enteritis of the hog, pigeon-pox, swine plague—in all of which the microbial origin has been determined by all the canons of science, we shall occupy ourselves only with those diseases which are common to man and animals, or to man alone, and will begin with:

CHARBON.

This disease is also known as splenic fever, wool-sorter's disease, anthrax. Endemic in some parts of Europe, charbon has been observed in this country. Its ravages among cattle and sheep has been great; in one Russian district alone, there perished in the course of three years 56,000 domestic

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animals, and 528 human beings. Severe constitutional symptoms of a typhoid character attend the development of this malady, which may almost be looked upon as the type of acute contagious diseases.

The attempts which have been made to ascertain the hidden cause of this disease have been followed by results as gratifying as they are surprising. Not only has the microbiotic origin of anthrax been proved beyond the possibility of cavil, so that all authorities worthy of respect admit it, but the specific bacterium, the *bacillus anthracis*, has been found and cultivated, and with the fungous product of a long series of cultures, the disease has been reproduced at will. Nay, more, a protective attenuated virus has been obtained by suitable cultures in which the modifying effect on the bacillus of exposure to oxygen has been utilized, and by the influence of this preventive vaccine, Pasteur has saved the flocks of Europe by the hundreds of thousands.

I am aware that Koch and others have endeavored to bring into discredit these anthracoid vaccinations, but the facts none the less remain on record as permanent acquisitions to science, that at Pouilly-le-Fort, in 1881, the efficacy of these attenuated-virus inoculations was proved on a large scale, and that during the years 1882, 1883, 1884, 1885, and 1886, during epidemics of charbon among the sheep of the agricultural districts of France, an average of 200,000 sheep were inoculated every year with a mortality during and after vaccination of less than one per cent. (See Chamberland's statistics furnished to the Congress of Vienna, Therapeutic Gazette, 1889, page 297.)

The order of events in the history of the discovery of the anthrax bacillus is as follows:

1. Davaine, in 1850, noticed the presence of certain peculiar bacilli in the blood of animals that had died of splenic fever. 2, Pollender, in 1855, also found these same rod-shaped bodies, and referred them to the vegetable kingdom. 3, Brauell inoculated some sheep with anthracoid blood from a man that had died of the disease, and caused their death by charbon. 4, Delafond, in 1860, tried to cultivate the rods and failed. He, however, gave the first idea of cultures. 5, In 1863, Davaine again took up the subject and showed that it is this rod-shaped bacterium that is the cause of the virulence of charbon, and he called it the *anthracoia bacterium*. 6, Koch, in 1875, proved by inoculating animals with pure cultures of the *bacillus anthracis*, and by producing the disease, that it is the *vera causa*.

Pasteur in 1877, with the aid of Joubert, cultivated many successive generations of the anthracoid bacillus in an appropriate liquid, and found that the last culture furnished a product capable of reproducing the disease by inoculation. Moreover, he filtered anthracoid blood, and found that the product of filtration was inert, while the residue remaining on the filter had decided infectant properties.*

TYPHOID FEVER.

There is a peculiar bacillus constantly found in Peyer's patches in typhoid fever, in the mesenteric glands, spleen, liver, and sometimes in the lungs and meninges. So constant is the presence of this bacillus in the intestines and spleen during the stationary period of the disease, that it is of considerable diagnostic value. Eberth and Klebs (1880–1883) gave the best description of this bacillus, and Gaffki obtained cultures of it in gelatine. It appears under the form of short mobile rods, or of a weaver's shuttle, with a central clear space. This bacillus multiplies by fission or sporulation; the spores are very resistant to all ordinary means of destruction; one of its functions seems to be to produce a very poisonous ptomaine, to which Brieger has given the name of *typhotoxine*. The typhoid bacillus may be found during life by making capillary punctures into the spleen and examining the blood thus obtained, also by examining the urine or fæces (Dujardin-Beaumetz). It has been repeatedly found in the dejections of typhoid patients, in suspected drinking water, and even in the soil of infected localities.

Although pure cultures of the bacillus typhosus have been readily obtained, and animals have been inoculated therewith, true

* Hallopeau, Path. Generale, 1890, p. 200.

typhoid fever has not thus far been induced. Of course, no such experiment has ever been attempted on man. It has been said that typhoid fever does not exist in the lower animals with the same symptoms which characterize the disease in man. At the same time, Frænkel, by introducing the product of pure cultures of the typhoid bacillus into the duodenum of guinea pigs, has caused the multiplication of this bacillus in Peyer's patches, in the submucous coat, and in the spleen.* Other experiments have obtained similar results with hares and mice, and have noted tumefaction of the spleen, mesenteric glands, and Peyer's patches.†

It will be seen from the above that the evidence is not quite complete that the bacillus of Eberth and Klebs is the cause of typhoid fever, for the disease has not yet been produced in man—the only animal susceptible to the disease—by inoculation of pure cultures. Yet something much resembling specific lesions has been produced in small animals by such inoculations, and, moreover, there has in numerous instances been pretty direct evidence of the genesis of the disease by the use of drinking water infected by the bacillus. So strong, in fact, is the evidence, that all the best recent treatises on Internal Pathology assume the bacillus of Eberth and Klebs to be the causal agent of dothinenteritis, and all the researches that have been of late going on favor and strengthen this conclusion.

CHOLERA.

Cholera is another disease that is not easily produced in animals, although Nicati and Reitsch claim to have brought about in guinea pigs the characteristic lesions and symptoms by introducing into the stomach or duodenum matter from the intestines of cholera patients.

There is strong reason for believing that the comma bacillus discovered by Koch in 1884, is the real pathogenic agent of cholera. This bacillus is found only in the intestines and stools; pure cultures may be made in gelatin-peptone, or agar-agar. These cultures liquefy the gelatin, and the other colonies which are obtained have a characteristic form: they constitute concentric zones whose centre is slightly depressed, giving a cup shaped appearance to the colony.*

Koch found constantly present in the autopsies of cholera patients (he made nearly a hundred of these autopsies during the epidemic in Egypt in 1884) the microörganism above named. Its length is about half that of the tubercle bacillus; it is more thick and massive than the latter, and presents a slight incurvation, whence its name *comma bacillus*. It is easy to demonstrate its presence in abundance in the intestinal mucous membrane and in the contents of the intestines of cholera patients. Koch claims also to have found the same microbe in the water of a pond which was the centre of an epidemic "*foyer*."

Koch's discovery has been confirmed by Ermengen, Nicàti and Rietsch, Doyen, Cornil and Babes, Watson Cheyne, and other experimenters who have had opportunities for making researches into the etiology of cholera.

There is not merely the argument of constant concomitance to prove the causal relation between the comma bacillus and cholera. The disease in many of its essential features has been reproduced by inoculating in guinea pigs the products of cultures of the comma bacillus; this Van Ermengen claims to have done, producing in the intestines of these animals lesions similar to those found in cholera.† Doyen also claims to have provoked choleriform accidents by introducing into the stomachs of guinea pigs pure cultures. Among the symptoms which followed the injection were algidity and cramps, and a profuse serous diarrhœa.‡

There is a general disposition among pathologists not animated by any unreasoning prejudice to accept as sufficiently proved the etiological relation between the comma bacillus and cholera. "*Il parait bien établi*," says Hallopeau in the last edition of his admirable text-book on Pathology, "*que le bacille de Koch est l'agent infectieux du cholera.*"

* Hallopeau, loc. cit.
† Ib.

* Dujardin-Beaumetz, L'Hygiène Prophylactique, p. 33.
† Van Ermengen, *Recherches sur le cholera Asiatique* Bruxelles, 1885.
‡ Hallopeau, *loc. cit.*

TETANUS.

Among the infectious diseases whose microbe is known, we must now reckon tetanus.

Carl and Rattone in 1884 established experimentally that tetanus is inoculable in animals. Nicolaier, the following year discovered in the soil certain bacilli which when innculated in animals produced tetanus. In 1886 Rosenbach found in the human subject, in lesions which were the seat of the disease, the same bacilli. Hochsinger, in 1887 cultivated the bacilli, and with the pure product, engendered the disease in animals. At the same time, it was only with the first culture that he was able to produce tetanus, so that the demonstration is as yet hardly complete.

Brieger has isolated from the products of the culture of this microbe a toxic substance, *tetanine*, which when inoculated in mice causes attacks of tetanus, and three other poisons which give rise to similar symptoms; hence, it is thought that it is by the intermediation of these poisons that the tetanic bacillus acts. At the same time Flagge and Rosenbach say that they have found the specific bacillus in the central nervous system of patients afflicted with tetanus. These bacilli and their spores are found in abundance on the surface of the ground and in the dust of roads. Verneuil thinks that tetanus is generally transmitted by horses; this has been disputed. It is certainly communicable from man to man.*

It is interesting in this connection to note that Dr. Behring and Kitsats, pupils of Dr. Koch, have recently been experimenting with the virus of tetanus and diphtheria, and they announce that these diseases may be cut short in animals by the injection of a small quantity of "a material perfectly constant in quantity, an inorganic chemical substance as easily obtained as any article in the materia medica." And not only so, but by means of the same substances, says Sir Joseph Lister from whom we quote, "these animals were rendered incapable of taking the disease under the most potent inoculations."† Verily, we seem to be on the eve of most important therapeutical discoveries based on bacteriology!

* Hallopeau.

† Lancet, Dec. 13th, 1890.

TUBERCULOSIS.

The history of tuberculosis constitutes one of the most interesting chapters of the germ theory of disease.

Thirty years ago, no one suspected tubercle to be infectious. In 1865, a remarkable memoir by Villemin, of Paris, communicated the fact that he had inoculated hares with tuberculous matter, and had induced tuberculosis in various organs. About the same time, some experiments of Tappeiner attracted considerable attention, he showed that it was easy to render dogs tuberculous by causing them to inhale in their kennels pulverizations of sputa from phthisical patients.

Villemin's inoculation experiments were repeated and with similar results by Cornil, Lebert, Waldenburg, Klebs, Gerlach, Wilson Fox, and others; Dieulafoy and Krishaber inoculated monkeys with tuberculous matter from the human subject, and produced various forms of tubercular disease. Out of twenty-four monkeys which were not inoculated, but were allowed to live promiscuously with monkeys that were phthisical, five died tuberculous.

Chauveau and Pauli, in 1868, showed that tuberculosis could be transmitted by the digestive passages, by causing animals to eat tuberculous meat.

For a time, Villemin's doctrine of tubercle being engendered only by tubercle seemed to be cast into the shade by the striking experiments of Lebert and Wyss, Burdon-Sanderson, Colin, and others which showed that pathological new formations in every respect resembling tubercle could be produced by introducing under the skin of animals, particles of purulent or cancerous matter, and even inert substances, such as lycopodium; it was soon, however, shown by Hippolyte Martin, that the morbid growths generated by irritant non-tuberculous substances differ in their nature from true tubercle granulations, the latter being inoculable in series, while the former are not; the non-tuberculous granule remaining localized, and never spreading.

The specific and infectious character of tuberculosis seemed thus to be established, and as the specific virus behaves in the

organism precisely like that of other diseases known to be infectious—a small amount of the poison multiplying indefinitely, like the living ferments, tuberculosis was affirmed by Bouchard and Jaccoud, as early as 1880, to be a parasitic disease.

It is to Robert Roch, to-day the most celebrated original experimenter in the world, that we owe the demonstration of the particular bacillus whose presence is the essential condition of tuberculosis. By a peculiar staining process, Koch succeeded in identifying the microbe which now goes by his name; he showed its constant concomitance with tuberculous matter, which is the first step in etiology. The next step was to isolate a certain number of the bacilli and cultivate them in sterilized blood serum. Day by day the growth of the new colony in the test tube could be watched; with a minute portion of the colony, a fresh culture was started, and the process was repeated a great many times, till finally, with the product of a culture far removed from the original tubercle juice (Koch in some instances carried his cultures down to the hundredth generation), animals susceptible to tuberculosis were inoculated, and the disease was readily reproduced. Koch's demonstration has been witnessed by a sufficient number of competent observers and repeated by enough experts to warrant the belief that the causal relation between the bacillus and every kind of tuberculous disease is settled for all time. At least, the common consent of scientific men the world over supports the claim which Koch has made, and it would seen that one must be of a very rare sceptical turn of mind—willing to accept nothing on proof, and determined to turn away the eyes from the plainest facts—who will now deny the causal relationship between Koch's bacillus and tuberculosis.

PNEUMONIA.

It may seem strange that a disease which was formerly regarded as the type of acute inflammatory diseases—pneumonia—should now be reckoned among the infectious diseases. The ætiological facts which demonstrate the infectious nature of a disease, are, as Hallopeau remarks, its transmissibility by contagion, its appearance under the form of epidemics, or its existence in certain localities in the state of endemicity. Now, acute pneumonia is observed in all the countries of the globe, and in all latitudes. Nevertheless, the facts by which the microbiotic origin of pneumonia is established are increasingly numerous and cogent, and the best authorities in this country and Europe now regard it as settled that *without microbes there can be no true pneumonia*.

The microbe oftenest found—if not constantly—in fibrinous pneumonia, is a *lanceolated streptococcus* discovered by Pasteur in 1881 in the saliva of a child that died of hydrophobia, afterwards found by Talamon in pneumonic sputa and exudation, and since then made the subject of important experimentation by Frænkel.† Its form is that of a grain of barley surrounded by a clear aureola which corresponds to a capsule, and is grouped in pairs or in chains. Talamon was the first to cultivate this microbe, which by its constant association with pneumonia has been called *pneumonococcus*, and by injecting in hares the product of several successive generations, to produce a genuine fibrinous pneumonia. The microscopic and macroscopic aspect of the lung was that of true lobar fibrinous or croupous pneumonia. The lung was hepatized in a large part or in all its extent. Under the microscope the alveoli were found filled with filaments of fibrine intercrossing in all directions; the pleura and pericardium were covered with thick layers of fibrine. Frænkel, Weischselbaum, and Gamaleia have obtained the same results. Injected under the skin, this microbe gives rise to a septicæmia generally fatal. It produces pneumonia if the product of a culture whose virulence has been enfeebled be injected.‡

Late writers whose competence cannot be called in question—Germain Sée, Cornil and Babes, Jurgensen—consider it now proved that pneumonia is an infectious disease due to the penetration and multiplication in the pulmonary alveoli of the lanceolated streptococcus (called by Hallopeau the Talamon-Frænkel microbe); they urge the fact of its

* Hallopeau, *loc. cit.*
† Hallopeau, *loc. cit.*
‡ Hallopeau, *loc. cit.*

constant presence, the possibility of provoking in animals by the injection of culture products the lesions of pneumonia, and the data furnished by clinical experience of the infectious nature of the disease, such as:—Its frequent development in the form of epidemics; its cyclical course; the impossibility of causing by irritations purely mechanical, such as intra-pulmonary injection of solid particles or liquids, a pneumonia of like kind with the appearance of general symptoms before the local manifest themselves.* The lesions of pneumonia are said to be characteristic products of the microbe; the secondary pneumonias are due to the invasion of the same microbe in an already enfeebled organism.

The argument is very ably presented by Talamon in Germain See's book "On Diseases of the Lungs of a Specific, not Tuberculous Nature," published by Wm. Wood & Co., 1886. At the time that this work was published, the announcement of the infectious nature of pneumonia was received with great incredulity; since then proofs have been accumulating, and the best authorities concede the position. If we may believe the statements, pneumonia is not only an infectious disease, but its microbe is one of the not ordinarily *malignant* kind, existing, in fact, in *normal saliva*, and it only becomes malignant and *pathogenic* when the organism is from some cause (as fatigue and a chill) debilitated, and the lungs thus rendered "a fit culture soil" for the microbe.

ERYSIPELAS.

Recent researches have shown the very close relationship between erysipelas and septicæmia, in fact, the former disease in the new pathology is classed as simply one of the manifestations of septicæmia. The micrococci found in connection with erysipelatous lesions are identical, as far as is yet known, with the septic micrococci and the micrococci of suppuration. The researches of Vidal have, in fact, shown that the streptococcus of erysipelas is the cause of puerperal infection and of suppurative inflammation. Clinical observation moreover, has, again and again proved the coincidence of epidemics of erysipelas and puerperal fever. Moreover, Winckel has succeeded in producing erysipelas in the hare by inoculating this animal with cultures of the streptococcus from a case of puerperal peritonitis (Hallopeau.) It is interesting in this connection to record that Fehleisen has cultivated the streptococcus from a genuine case of erysipelas, and with the product of this culture, induced the disease in man by inoculation (Fehleisen, *Zur Aetiologie des Erysipels*, Berlin, 1883.)

This is the place to speak of Puerperal Infection, of Surgical Fever, of Pyæmia, of Acute Suppuration generally, which are all accidents of traumatism, of the lying-in-state, etc., and along with Erysipelas may be classed under the general head of Septicæmia. The morbid manifestations which belong to this category are engendered by certain round micrococci which prove highly irritant to the tissues which they invade—either by properties of their own or ptomaines which they secrete—and produce severe constitutional reaction with eventually collapse and death, unless the organism be successful in the struggle with the microbe foe.

Although the microbic element of puerperal infection, traumatic fever, etc., presents itself under different forms (staphylococcus, streptococcus, etc.), there is no proof that the morphological differences imply differences in nature and pathogenic action, and Chauveau and Arloing maintain with great probability that it is always the same microbe under different states of development. More depends on the organic soil and susceptibility of the patient than on any particular virulence of the microbe as to what morbid changes shall be effected.*

There is, of course, a great deal still to be learned regarding the biology of these microorganisms; enough is, however, known to have a great practical outcome, and the *prophylaxis* of puerperal septicæmia, of surgical infection, etc., by reason of the scrupulous care taken to effect perfect asepsis and antisepsis, has been of late years wonderfully successful. We need only appeal to the relatively trifling mortality in our

* Hallopeau, *loc. cit.*

* Vide Hallopeau, *loc. cit., art. Septicemie.*

lying-in and surgical hospitals of to-day as compared with the mortality of fifty years or more ago.

ULCEROUS ENDOCARDITIS.

Ulcerous endocarditis has within a few years been proved to be a microbe disease, but the microbes which produce it appear to be of different kinds (the staphylococcus and streptococcus of septicæmia, the lanceolated microbe of pneumonia, even the bacillus tuberculosis).

The experimental demonstration has been been made by Rosenbach and Wyssokowitsch with pure cultures of the staphylococcus and strephtococcus, but only in animals whose valves they had previously injured by means of a sound introduced into the carotid. Ribbert, however, claims that he has produced ulcerous endocarditis in animals without previous wound of the valves.

DIPHTHERIA.

The advocates of the germ theory claim diphtheria among the diseases whose micro-organism is now known. The microbe is a bacillus discovered by Klebs and studied by Loeffler. The latter has succeeded in separating this bacillus (which is about as long as the tubercle bacillus and double the width), by culture from common bacteria, and by inoculating with it the tracheal mucous membrane and conjunctivæ of hens, pigeons, and hares, he has caused the development of false membranes precisely like those of human diphtheria, and containing the bacillus in abundance. Roux and Yersin last year repeated these experiments, and after having reproduced false membranes in animals which they inoculated with the product of their cultures, they were fortunate enough to see several cases of paralysis supervene, precisely similar to the paralyses which often follow diphtheria in the human subject. They also isolated from their cultures a poison which according to the dose, rapidly kills animals or makes them paralyzed.

These experiments seem sufficiently conclusive. Contrarily to other microbial diseases, diphtheria, it is said, does not produce its infection by the penetration and multiplication of bacteria in the tissues, but by the diffusion in the organism of a toxic substance engendered on the surface of a mucous membrane.* This view seems to be in accordance with clinical facts.

GLANDERS.

Glanders, that so fatal disease which prevails among horses and is communicable to man, is another disease whose ætiology seems to be definitely known. The microbe of glanders was found in 1881 by Babes and Havas; was cultivated later by Bouchard, Capitan, and Charrin; inoculations were made in animals susceptible to glanders, and the disease reproduced. Lœffler and Schütz have recently obtained positive results of the same kind.

To these diseases whose microbes are known, we may add gonorrhœa and soft chancre. Malaria is the product of a parasitic *animalcule*, a hæmatozoon belonging to the Infusoria, discovered by Laveran in 1881.

In the MEDICAL AGE, volume for 1889, under the head "Mysteries of Malaria," will be found an account of this discovery. Other experimenters in various parts of the world, notably Sternberg, Councilman, and Osler in this country, have confirmed Laveran's claims, but the "hæmatozoon" cannot be cultivated in any medium outside of the body, nor can the disease be reproduced in animals.

I have enumerated the principal infectious diseases which affect the human subject, whose micro-organism is known. I say *known*, for I believe the evidence to be sufficiently strong to satisfy any reasonable person. I know that there are some who still take pride in denying the bacterial origin of all infectious diseases. I believe that such persons obstruct the course of progressive medicine by their unreasonable conservatism. Certainly all progress in medicine at the present day seems to be along the line of the GERM THEORY OF DISEASE!

THE INHALATION METHOD IN THE TREATMENT OF PHTHISIS PULMONALIS.†

BY E. L. SHURLEY, M. D.‡

The following cases have been selected to illustrate the utility of properly constructed

* Hallopeau.

† Harper Hospital Bulletin, December, 1890.

‡ Professor of Laryngology and Clinical Medicine in the Detroit College of Medicine.

apartments for the local treatment of chronic pulmonary diseases. While inhalation as a means of treatment has rapidly grown in favor of late years, still the means of carrying out such treatment has been exceedingly faulty, as every one will, I think, testify who has had experience in this line of work. The several inhalers in the market, while highly beneficial for temporary or intracurrent use, are wholly inadequate toward producing any stable impression. It is obvious that to medicate such a large area as that presented by the internal pulmonary structure requires not only a very thorough, but a prolonged exposure to the medicament —a desideratum which can be attained only by placing the patient in an apartment where the remedy can be thoroughly diffused, and thus be carried in with the respired air. This we think has been in a measure accomplished at Harper hospital by means of inhaling rooms, in which spray is diffused, and our "face shield" inhaler, through which the whole of the respired air must pass, as shown in the accompanying illustrations, Fig. 1.

Various substances have been used, from time to time, during the last two years, with, of course, varying results, such as bichloride and biniodide of mercury, iodoform, naphthaline, iodine, carbolic acid, creoline, oil of eucalyptus, oil of tar, chlorine gas, etc. The mercuric salts, iodoform, creoline, and chlorine have yielded the best results so far. Concerning chlorine—we have shown by experiments upon monkeys and Guinea-pigs (as will be seen by reference to the papers published by Dr. Gibbes and myself in the American Journal of the Medical Sciences, June, 1890) that although it would certainly render sputum from cases of phthisis pulmonalis innocuous when mixed outside the body, it has been so irritating and irrespirable in a sufficient quantity as heretofore employed, that we have been unable to use it as much as we desired. Indeed, some of the monkeys subjected to its use died with active inflammation of the air passages. The reason of this is probably due to the rapid formation of hydrochloric or hydrochlorous acid, by the action of the gas on the elements of the air. Yet thoroughly convinced by experiments upon animals that chlorine gas was perhaps the most efficacious agent for the local treatment of phthisis pulmonalis, especially in the advanced stages, we cast about with considerable energy, to reach some practical method for its introduction, with the final result of discovering that a patient could inhale it for a long time, if the gas was liberated in the presence of a spray of chloride of sodium; we had previously tried ammonia and sodium bicarbonate without effect That this practical effect as we were led to anticipate, is proven by the fact that sputum which has been thoroughly exposed to chlorine gas will not produce disease in a Guinea-pig, or monkey inoculated with it; also, that sputum from a patient who has been subjected to this treatment by inhalation, will not produce disease in animals inoculated with it. That it remains in the lungs for a considerable time after inhalation is shown by a case, whose expectoration the following morning after inhalation (during the afternoon of the previous day) would show very sensibly to the patient and attendants the presence of chlorine gas. We have a number of cases still under treatment with very promising prospects. The first three cases, narrated briefly below were treated mostly with chlorine.

Case 1.—Mrs. J. D., æt. 29, native of Canada, married nine years, had one child seven years ago. Lived in poverty more or less of the time. Good family history. Was never exposed to cases of phthisis. Brought to Harper Hospital, Sept. 13, 1890, in an emaciated and weak state. Clinical history as follows: Was tolerably well until December, last year, when she was attacked with so-called "La Grippe" which confined her to bed for some time. Since then she has never been well; had cough, chills, fever, and diarrhœa, anorexia and more or less nocturnal sweating. Had hæmoptysis last January, covering a period of three days. Never had odynphagia or much hoarseness.

Her condition at date of entrance to the Hospital was as follows: Great emaciation, anorexia, diarrhœa and tenderness of abdomen; skin moist, tongue red. Evening of September 13th: Temperature, 101°; pulse, 100; respiration, 26. Expectoration considerable; very restless. Bacilli tuberculosis

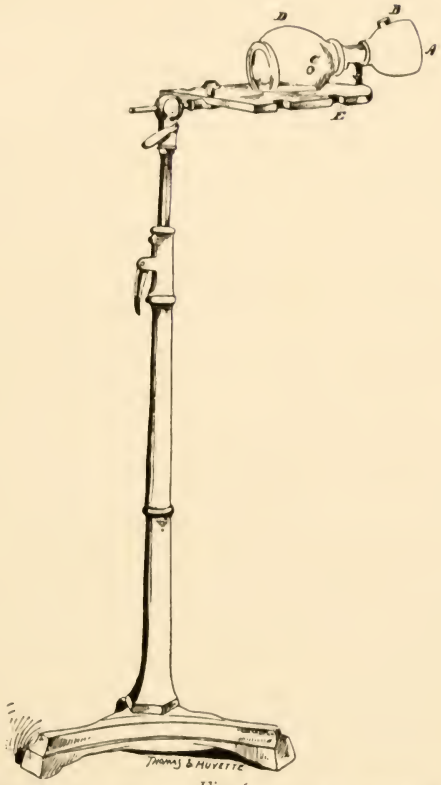

Fig. 1.

FACE SHIELD INHALER WITH STAND.

A—Rubber Face Shield, with
B—Valve for exit for breath.
D—Glass Globe.
C—Opening in Globe, for insertion of spray tube and for entrance of air.
E—Notch in edge of Globe-holder for holding bottle or tube containing the medicament for atomization.

Fig. 2

VIEW OF AN INHALING ROOM.

(Which is 10x12 feet.)

A—Spray Tube attached to pipe from compressed air tank.
B—Steam Coil for raising temperature of room quickly.
C—Spray Tube attached to steam pipe for steam spray.

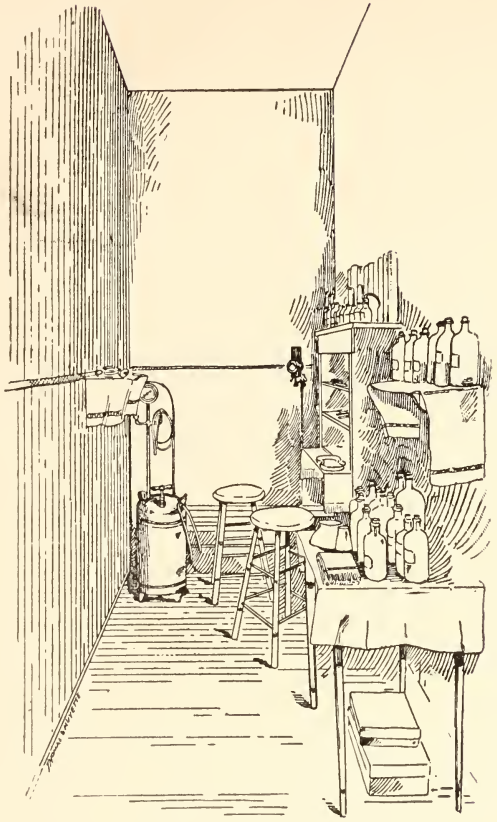

Fig. 3.

LARYNGOSCOPIC ROOM.

Fig. 4.

VIEW OF A CORNER OF WARD.

Showing Tubes for medicating air of ward. Showing Chest Pulleys and outside of an Inhaling Room.

in the sputum. Auscultation showed—Bronchial respiration and bronchophony over both upper fronts, mucous and gurgling râles, and at left apex cavernous respiration. The case continued to progress unfavorably and she died November 20th, 1890. Autopsy showed extensive excavation and caseation, and tubercular deposits in mesenteric glands. The inhalation treatment of this case was until the last three weeks mainly by chlorine water , or chlorine gas, which could be detected as before stated in the expectoration. Many specimens of sputum were examined from time to time by Dr. Duffield, the Hospital Pathologist, showing in each instance the presence of bacilli, and yet it was impossible to successfully inoculate Guinea pigs from such sputum, while the patient was subjected to the chlorine inhalations.

Case 2.—W. K., male, æt. 28, native of England. Occupation, bridge carpenter. Married five years. Habits good. Family history good. General health good until last January, when suffered from "La Grippe," never had hæmoptysis, (no contagious element); since then chills and fever, on and off, growing debility and continual cough, and expectoration which is growing. No diarrhœa. No odynphagia or nasal catarrh. No hoarseness, more or less pain in left side of thorax: of late, nocturnal sweating.

Entered Hospital October 10th, 1890. Complained of weakness, cough, anorexia, frequent respiration and pain in left side. Temperature, 101.5°; pulse, 120; small: respiration, 26. Expectoration of first few days about six oz. in 24 hours. Sputum showed a few bacilli tuberculosis.

Physical signs—Percussion duller over left front. Auscultation—mucous and gurgling râles over left apex and bronchial respiration and bronchophony over upper left front to fifth rib, also abnormal transmission of heart-sounds over a large area. Evening temperature ranging from 103° to 101° until about October 9th, when it lowered mainly to 99°. Pulse and respiration accordingly—the latter ranging from 20 to 24 during the last week of his stay in Hospital. The expectoration gradually diminished and during the last 14 days he was harrassed with a dry cough whidh required anodynes to allay. Appetite improved, also strength, and excepting attacks of diarrhœa lasting from October 15th to 17th and November 1st to 5th, his digestion was good and bowels in order, while the diet allowed was liberal. His general treatment consisted mainly in the administration of salicine and extract of malt, and syrup hypophos. co. with iodide of iron, with occasional doses of quinine and acetanilid until November 2d, when 1-12th to 1-16th gr. of iodine in solution with potassium iodide was administered hypodermically every day or alternate day.

The chlorine inhalation with spray of chloride of sodium, was commenced October 20th, and continued twice or three times a day, in from twenty-minute to half-hour seances, until his departure November 18th. (Previously he had inhaled a spray of naphthaline in inhaling room.) Examination of sputum collected on the 17th showed no bacilli tuberculosis according to Dr. Duffield.

Physical examinations of chest were as follows: October 26th—Mucous crackling over upper left front and back to about third rib; below this no râles but bronchial respiration. November 9th — No râles, paddle-wheel respiration, bronchial resonance and still some abnormal transmission of heart sounds. He left the Hospital on the 18th very much improved. Has considerable cough, but little expectoration. I saw him at my office on the afternoon of the 21st, when he was not feeling quite as well, the physical signs however were the same, although the temperature was elevated (100°). Of course he should have remained longer. Although the case cannot be looked upon as recovered, yet the course shown has certainly been remarkably favorable. On the 24th he was better—no elevation of temperature, and I again gave him a hypodermic injection of iodine.

Case 3.—C. B. A., male, æt 21, native of Michigan, single, student. Always lived in good surroundings. Several maternal aunts and uncles died of phthisis pulmonalis, but patient was never with them much. Paternal relatives healthy. Generally been well until about six months ago, took cold (although not subject to cold) and has coughed ever since. Has also been hoarse more or less, seldom had odynphagia, no dyspepsia or diarrhœa, no hæmoptysis—has expectorated

some times a little bloody mucous. Has had chills, fever and nocturnal sweating on and off. Been gradually emaciating and losing strength, cough and expectoration increasing.

Entered Harper Hospital Sept. 19th, 1890; was thin, somewhat hoarse, had considerable cough but not much expectoration. Pulse, 108; temperature, 99°; respiration, 28; extra secretion from nasal passage and pharynx. Larynx hyperæmic but not swollen, vocal cords round and reddish-brown in color. No bacilli tuberculosis in sputum.

Physical Signs.—Percussion; high pitch over upper right front and dull over right back. Auscultation showed bronchial respiration and abnormal transmission of heart sounds over upper right front, but no rales or pectoriloquy, subcrepitant rales over right back.

Remained in Hospital about a month. During first two weeks evening temperature ranged between 100° and 102° and respiration from 25 to 30; the last two weeks, however, the temperature range was less—from 99° to 100°. Dry cough continued, however, especially at night, with more or less odynphagia. On October 13th and 14th had quite a severe sore throat, with rise of temperature. This, however, soon subsided. He took internally syrup ferri iodide with syrup hypophos. co. The local treatment at first consisted of insufflation of iodoform and inhalations of creoline three times a day. But for the last two weeks of his stay he was subjected to inhalations of chlorine. Upon his departure from the Hospital he was stronger, had very little cough, no nocturnal sweating, appetite fairly good, no odynphagia but some hoarseness. Auscultation showed no rales anywhere—although bronchial respiration was still present over upper right front and back; larynx was still hyperæmic, but vocal cords were much lighter in color. The evening temperature for the last week was only 99°.

At this writing (November 26th) I understand he is holding his own, though of course he is not well. He coutemplated sojourning for the winter in the South. The subsidence of the graver symptoms and signs in this case was undoubtedly due to the inhalation of both iodoform and chlorine.

Case 4.—M. L., æt. 24, clerk, single, native of Michigan. Drinks beer very moderately and smokes, otherwise habits good. Family history good. Generally well until four months ago, contracted a cold, and since then has coughed and had more or less fever with growing hoarseness and weakness; for last six weeks has had occasional nocturnal sweats, chills and fever, shortness of breath and loss of appetite growing, bowels irregular, sometimes loose and other times constipated; no hæmoptysis.

Entered Hospital, September 22d, 1890, somewhat emaciated and weak, but able to be up and around all day. Hoarse, with cough, and not much expectoration, no diarrhœa, but poor appetite. Pulse, 100; respiration, 24; temperature, 100.2° (P. M.). Laryngoscopic examination showed pharynx and larynx hyperæmic, slight swelling of arytenoids, vocal cords brownish, ventricular-bands thick, whole interior of larynx wet. Physical exploration of chest showed crepitant and sub-crepitant rales over right apex and bronchial and broncho-vesicular respiration in patches over both lungs. Temperature from 28th to 30th was at evening 101° and 101.8°, with increased hoarseness and diarrhœa, which subsided however by October 2d, when temperature fell, but rose again on the evening of the 8th to 100°—caused probably by a fatiguing walk. Respiration on this occasion was 30 per minute. From about October 10th to 22d (when he left the Hospital) his improvement in every respect was rapid; temperature running mostly at 98.5° to 99°, respiration 20 to 23, and pulse from 84 to 90, appetite improved, digestion good, less and less cough with clearing of the voice; larynx improved also to a great extent.

At first the treatment consisted in inhalations of mercuric bichloride every morning, and insufflation of iodoform every afternoon and evening. On October 12th, creoline was substituted for the mercuric bichloride. He took internally salicine and extract of malt, excepting at the time of diarrhœa, when bismuth and acid tannic and tannate of quinine were administered. He felt quite well when he left the Hospital, and has continued (I have heard) to improve ever since.

Case 5.—Geo. H., æt. 22, German, farmer, single. Good habits. Lived in damp region

with considerable shade about house. Lost one sister with phthisis pulmonalis. Though never fleshy, generally well until 1887, when he had pneumonia. Has had cough since, with more or less fever and alternate constipation and diarrhœa, weakness, fever, and cough. Had hæmoptysis a year ago. Diarrhœa has been persistent for past two months, also diurnal fever and chills.

Entered Harper Hospital September 22d. Very weak and emaciated, and of bluish countenance; temperature, 101°; respiration, 30 per minute. Left ear discharging—and has been for about a year, he says. Bowels loose; no appetite; considerable cough and expectoration. Voice good; no nasal catarrh. Physical exploration shows mucous and gurgling râles over both upper fronts and right back, and dullness on percussion. Sputum shows great abundance of bacilli tuberculosis. The temperature ranged from 96.5° and 97.5° mornings, to 102° and 103° (at times) evenings. The diarrhœa continued despite the administration of strong astringents and anodynes, reaching on some occasions (12th and 18th of October) eight and twelve stools respectively. The cough and expectoration, however, diminished considerably, the latter going from 8 oz. in twenty-four hours to 3 oz. This phenomenon might be considered as a consequence of large discharges from the intestines, but was not constant with such events; it was a steady diminution. He was at first given the creoline inhalations, but on the 2d of October was given regularly the iodoform insufflation until the 10th of October, when he was given chlorine-water spray. From this time the expectoration seemed to diminish more rapidly. On account of his weakness, however, all local treatment was discontinued on the 19th of October. During the time he was under the chlorine-water inhalations (three times a day, which lasted for about a week) we failed to produce disease in Guinea-pigs inoculated with his sputum, although at the same time Dr. Duffield reported the presence of bacilli tuberculosis. I regret that the fæces were not examined for bacilli. For this is undoubtedly a case of general tuberculosis. Although he stated that he had had pneumonia in 1887, the apparent foci of disease were at the apices of the lungs. It is probable that the disease of the left ear was secondary to tubercular deposit elsewhere. He left the Hospital on the 22d of October, very weak of course, and without hope of recovery. We have not heard of him since.

Case 6.—T. McR., male, æt. 35, native of New York; occupation, civil engineer; married; good habits. Good family history. Has been generally well until four years ago, he says, he had pleuro-poeumonia—was ill twelve weeks. Never had been around any one affected with cough. Has been well until thirteen months ago, since which time he had cough, indigestion, chills and fever, and increasing shortness of breath. Never had a real hæmoptysis—although, on one occasion, expectorated a teaspoonful of bloody mucous. Was in Denver, Colorado, all last winter.

Entered Harper Hospital Aug. 2d, 1890. Looks well; weight, 145; height, 5 feet 11½ inches. Pulse 84, firm and full; respiration 40; temperature (4 P.M.) 99°. Skin normal. Considerable cough; expectorated about one ounce daily. Sputum contained tubercule bacilli. Voice rather hoarse most of the time, with sensation of dryness of throat, and some odynphagia. Examination of throat shows pharynx and upper larynx reddened, and bathed with tenacious secretion, arytenoids swollen and red, vocal cords reddish, and glands of laryngeal ventricles somewhat enlarged; no nasal stenosis or extra discharge.

Physical Exploration of Chest.—Percussion *nil.* Auscultation showed prolonged expiration, loud respiratory murmur, and abnormal transmission of heart sounds over upper right front and back, and sibilant and creaking râles over upper left front, with loss of vesicular quality. The evening temperature ranged between 100° and 102.5°, morning temperature from 97° to 99°, and respiration 25 to 30 up to about August 8th, when, excepting on the 13th and 30th, there was a gradual decrease. The evening temperature ranging only between 100° and 101°. He did not eat well, and had slow digestion, cough was excessive at night, but with very little expectoration. August 24th to 27th he had severe sore throat and some diarrhœa, which was supposed to have been caused by

inhalation of chlorine gas. This was stopped and throat treated with iodoform.

At this time examination of sputum showed a few tubercule bacilli, but on September 1st examination showed none. When he left the Hospital, September 10th, physical exploration of chest showed but little change in physical signs excepting the absence of the sibilant and creaking râles, but his general condition was much improved, appetite and digestion better. The general treatment consisted mainly of salicine and extract of malt, with four drachms of whisky, three times a day, together with highly nourishing diet. The local treatment consisted in inhalations of chlorine for about a week (the second week of his residence in the Hospital), and the remaining time iodoform inhalations once daily and inhalations of creoline in oil three times daily. This treatment he has kept up since his departure, and he writes me under date of November 25th that he has gradually gained seven pounds. Has a little fever at night, but no chills. Appetite and digestion good. Feels strong, and has been attending to business since. Could he now remove to a favorable southern climate, I believe he would entirely recover.

REFLEX URETHRAL PHENOMENA.*

BY DR. J. A. FORT.

Chronic affections of the urethra, principally the chronic urethrites, whether or not produced by urethral stricture, give rise in the majority of cases to phenomena purely local. But under certain circumstances, different symptoms, very often though not always of a nervous order, manifest themselves at a more or less considerable distance from the seat of the disease, and may cause errors of diagnosis. In truth, nothing is more variable than these reflex phenomena. In some cases, as we shall see in one of the observations reported, an excess of asthma supervenes each time as a result of an operation on the urethra; at times, an almost permanent condition of satyriasis provoked by stricture; moreover, symptoms of suffocation may result from the presence of a sound in the canal. With one patient, we may see painful symptoms, of neuralgic character, radiating into several regions at a certain distance from the urethra; with another, it may be a nephritic attack which is developed as the result of an operation on the inflamed urethra; finally, these reflex phenomena may assume the febrile form. It is probable that the manifestations alluded to are very frequent, and I cite here a certain number of remarkable observations:

Case 1.—A brother practitioner, residing in Paris, has suffered for more than thirty-five years from an old stricture. He has been urethrotomized eleven times. The walls of the urethra are rugous, and the canal contracted at several points. Life has become insupportable, as he cannot urinate without the aid of a catheter. He uses one continually.

From time to time, when his canal becomes contracted, and when he experiences difficulty in introducing the catheter, he is seized with an access of suffocation, with whistling sounds,—real attacks of asthma—which, however, last for only a few minutes, and may be overcome by the ordinary therapeutic measures.

I was intrusted with the care of this patient in October, 1889, and despite several applications of linear electrolysis have not yet succeeded in vanquishing the contractions. However, since the patient was subjected to the first operation, he urinates better and dispenses with the catheter.

But the interest of this observation does not lie in the facts mentioned; it is in the following: During the last three operations of electrolysis which I performed, he has been seized each time during the operation with veritable asthma, very intense in character, the duration of which has not exceeded ten to fifteen minutes. It is to be remarked that at the moment of beginning the operation of electrolysis, it was impossible to foresee the occurrence of an access of suffocation.

Case 2.—At the suggestion of his physician, a patient comes from Orleans to consult me for a very singular malady. He has suffered from stricture of the urethra, with gout, for more than ten years. The chief affliction is an almost permanent erec-

* Translated for the Medical Age, by Mr. Jos. Helfman, Detroit, Mich.

tion, a veritable satyriasis exhausting his health. Erection, at the sight of a woman; erection, at the least contact with a woman; erection, if his wife casually touches his body, no matter when. This unhappy man is forced to be continually on the guard in order to calm the urethismic condition of his virile member. His life is a torture; he has lost all desire to live; has become anæmic and very nervous; has extreme facial pallor, and is always fatigued and unequal to the least intellectual labor.

I cannot make any positive statements respecting this patient; but having observed several analogous cases, am firmly convinced that the operation for stricture would relieve him. I am persuaded that in many cases, the contractile susceptibility of the seminal vesicles, and the expulsion of sperma without coitus, are to be regarded as complications of the urethral stricture, and of catarrh of the mucous membrane of this canal.

Case 3.—During last June, I had occasion to operate at Vincennes, by means of linear electrolysis, on a patient whose urethra, the seat of six contractions, was in a most deplorable condition. The malady dated ten years back, and the strictures were complicated by a very abundant muco-purulent secretion. This patient, suffering from exaggerated urethral susceptibility, informed me he had been attacked by a formidable access of fever every time the catheter was inserted. For this reason I desired to insert a stationary catheter after the operation of electrolysis, hoping thus to prevent the fever which, moreover, did not appear.

A No. 16 catheter, open at both ends, was inserted at ten o'clock in the morning. All went well; the urine flowed freely, and there was nothing to presage the least accident, when, after several hours, the patient was seized with violent urethral pains, radiating into regions of the abdomen and thorax. These pains grew in intensity, and were complicated with suffocation almost attaining syncope. The people who attended the patient, not daring to remove the catheter, had recourse to all possible measures to calm him, going so far as to administer inhalations of chloroform. Finally, fearing to see him succumb during syncope, a physician withdrew the instrument. Immediately, the nervous condition disappeared, the patient experienced no more pain, and quickly fell asleep. Since that time, his health has been good, and the results of the operation of electrolysis have been excellent.

Case 4.—M. X., merchant, consulted me for violent neuralgic pains in the inguinal and renal hypogastric region. A slight mucous exudation from the meatus causes a suspicion of stricture. By exploring the canal, I discovered, as supposed, a stricture of three millimetres at a depth of 17 centimetres. This patient, whose pains had reappeared about three years before, was treated by linear electrolysis and cured of his stricture, as also of the gout which accompanied it. And the fact that the pains were caused by the stricture, is shown by their complete disappearance during the treatment of the urethral lesion.

Case 5.—The following is another case in which performance of operation—otherwise contact with the diseased urethra—has produced a reaction on one of the viscera. The lungs were not involved, as in Case I, but the kidney:

A young foreigner, 22 years old, had been treated without success in several capitols of Europe. He suffered not only from a stricture of 2 mm. situated at a depth of 17 cm., but also from a muco-purulent secretion so abundant as to require the most scrupulous cleanliness and care. Linear electrolysis was performed, and the patient completely cured. Four years previously, he had had a nephritis which was treated and cured by one of the most celebrated physicians of St. Petersburg. The regular physician of this patient had habitually examined his urine, and there was not the least trace of albumen at the moment of operation.

On the day of the operation he experienced severe pain in the right renal region, and the next day we observed the presence of a certain quantity of albumen in the urine. The pulse and the temperature did not undergo sensible elevation, but M. Lancereaux, called into consultation, declared that there was, if not nephritis, at least a congestive determination toward the kidney.

The albumen was estimated with the albuminometer of Esbach. The first day, we

found one gramme of albumen. The following days, the quantity of albumen diminished insensibly, and eight days later, no trace of it remained.

Case 6.—The 15th of last February, M. Chatenier referred to me a patient suffering for the last two years from urethral stricture. This man, an employé, aged 38 years, complains particularly of such difficulty in urinating that the liquid escapes only drop by drop; sometimes the stream is altogether arrested; great itching at the meatus, pains in the urethral region. But curiously enough, pains, apparently muscular, seem to be seated in both thighs, though more pronounced in the right. There are also quite severe hypogastric pains. This man is suffering from a veritable paresia of the lower members, which refuse to perform their office. Formerly he went on foot every day from Neuilly to Paris, and now he has to take a conveyance.

Though I determined the presence of a deep stricture, two millimetres in diameter, I was firmly convinced this patient was suffering from a commencing medullary affection. But the complete disappearance of the symptoms of the semi-paralysis above mentioned was effected by the cure of the urethral stricture and of the exudation which accompanied it. This cure was accomplished by the performance of the operation of electrolysis. Since that time we have had no more doubt respecting the relation existing between the urethral lesion and the symptoms of paralysis.

It may be objected that this is a coincidence, but such an explanation would be inadmissible. Three months later the same paralytic symptoms again appeared, and I observed a certain degree of contraction at the strictured point. I again subjected the patient to linear electrolysis, and again the symptoms of paralysis vanished.

The reflex phenomena here discussed, which depend upon a urethral lesion, are not absolutely rare. I know of a certain additional number, and recently a confrère directed to me a patient suffering from general nervousness, caused absolutely by urethral stricture.

Those who have treated the maladies of the urinary passages, should not be surprised by the relation mentioned as existing between strictures and nervous phenomena. To comprehend this relation, it will be sufficient to compare the same individual, suffering from compact stricture, before and after the operation. Before the operation, the sufferer experiences a general *malaise*, he has no appetite, he is disagreeable, peevish, and every moment shows a new phase of ugliness. He feels a weight, a kind of embarrassment in the lower part of the abdomen; there is a sort of prickling feeling which harasses him unceasingly and gives rise to an indefinable discomfort. After the operation has been successfully performed, the *malaise* disappears, the gaiety of the spirits returns, and a very agreeable feeling of well-being—a sort of nervous relaxation—take the place of the *malaise* which prevailed before the operation.

Paris, France.

METHYL-VIOLET.*

(Or the fancy copyrighted name *Pyoktanin.*)

BY FLAVEL B. TIFFANY, M.D., KANSAS CITY, MO.

A few months ago Dr. J. Stilling, of Strasburgh, gave to the world, in the April number of Revue Generale D'Ophthalmologie, his experience in the use of methyl-violet in the treatment of various affections, more especially those of the eye.

When the article first appeared, May, 1890, I took the liberty of translating it, and subsequently my translation was published in two different numbers (not consecutive) of the Kansas City Medical Index. I commenced the use of methy violet from the day I first read Professor Stilling's article, for at that time I had on hand a case of suppurative iritis which had resisted all treatment, continuing step by step through the several stages of inflammation until panophthalmitis seemed inevitable. The patient was an old man of 72 years; of rather feeble physique, upon whom I had made extraction of a nuclear cataract some eight weeks previous to the attack of iritis. He had made a good recovery from the operation, and with fair results, viz., with

* Read before the Medical Society of the Missouri Valley, 1890.

+11Dr=$\frac{20}{40}$. Could read No. 2 with +14D. There was a slight amount of cortical substance remaining. The iritis did not ensue for a month after he had gone from the hospital, when it appeared quite suddenly one day, as he was sitting in the harvest field, watching the harvesters at work; he says as he crossed the lot from one shade tree to another in the full blaze of the bright harvest sun, he felt a sharp pain dart through the eye, and, from that time, he was not wholly free from pain, which, gradually increased with intolerance of light, and diminution of vision. It was several days after the attack before the patient returned to the city. When he presented himself, I found an intense inflammation of the iris, with plastic exudation into the front chambers.

Mydriatics and hot water applications were scrupulously used, in connection with other antiphlogistics, but all to no purpose; the inflammation mounted higher and higher, and the exudation was more profuse and of a suppurative character,—the iris becoming a deeper red until finally the whole chamber became blood red; the cornea began to grow steamy, there was intense ciliary injection; in fact, the whole ball was aglow and the lids swollen. There was much pain, and total blindness, and I despaired of any chance of saving the ball, much less any sight.

It was at this stage, that I read Prof. Stilling's article on methyl-violet. I immediately had a preparation made, 1 to 1000, which I had dropped into the eye one or two drops at a time thrice a day. This caused no irritation, but for a few hours there was little if any amelioration of the inflammation, although the eye felt better. At the end of the second day there was perceptible abatement of the congestion, and the pain was nearly gone.

The amount of medicine was increased. The conjunctival sac was filled at each application morning, noon and night, and the inflammation gradually subsided.

The methyl-violet was continued for about three weeks, when the eyeball had become clear and free from inflammation. The shape and size of the ball had been perfectly con served, the iris had assumed its natural color, and brilliancy although the pupil was nearly occluded and there was only perception of sight. The patient returned to his home in Kansas with the hope, through the means of a subsequent operation in a few months, of regaining useful vision.* It has been about six or seven months since I commenced the use of methyl-violet in affections of the eye.

I have used it a great many times, and in many patients, and have kept a careful record of several of the cases. It has been mostly used in phlyctenular conjunctivitis and granular conjunctivitis.

In case of trachoma, when treatment cannot be continued by me, on account of patients being obliged to return to their homes out of the city, it has become my custom to prescribe a bottle of methyl-violet (1 to 1000), to use at home three times a day, and it has been invariably the case that these patients go on to recovery without any relapses, and that the medicine never acts as an irritant, but is always soothing and agreeable. I have used it with excellent effect in dacryocystitis by means of the lachrymal syringe. I have also used it in otitis media purulenta, but not with as marked benefit as in affections of the eye, lachrymal apparatus, and nasal catarrh.

I have employed this agent in microscopy as a staining material, knowing its special and thorough action as a stain for different form of microbes, and especially for the micrococci, and that it always means death to the bacilli when it comes in contact with them, striking, as it were, to the heart or nucleus of all cells, paralyzing all vital action at once; but it had not occurred to me to employ it as a therapeutic agent ever in those diseases which are generally conceded to have their etiology in microbes, until my attention was called to it by Professor's Stilling's able article, to which I have referred.

Since I have been using this agent, I have not had the opportunity of employing it in a single case of gonorrhœal ophthalmia.

As yet, of course, the remedy has not been sufficiently used to establish it as so valuable a remedy as Prof. Stilling claims it to be.

Methyl-violet may be used as a local,

*I have since heard that he could see to count figures.

topical and general systemic agent in fluid, or pomade, spray $\frac{1}{20}$ to 1 percent. It remains to be seen if it will prove a valuable remedy in pulmonary affections, in pyæmia, etc. If it has a special predilection for bacilli and cocci, we shall look upon it as a boon in most diseases.

Within the last few days I have had occasion to use the methyl-violet in two cases one of irido-cyclitis and the other choroido-cyclo iritis, both of a most serious nature. That of irido-cyclitis occurred in a reverend gentleman, Mr. D. aged 55, blue eyes. This patient consulted me December 9th, complaining of quite a severe pain in the right eye, with dimness of vision. Examination revealed acute inflammation of the iris, with intense deep red congestion of the sub-conjunctival vessels over the entire anterior scleral surface. The pupil was contracted and inactive, and would not respond in the least to mydriatics. A one per cent. solution of sulphate of atropia, dropped into the eye five or six times a day, made no impression whatever; not even controlling in the least the photophobia or congestion; in fact all the symptoms grew steadily worse, and on the third day the cornea lost its transparency, became steamy, so that the iris was nearly hidden and the vision was gone. Could not see to count fingers, the eye had taken on symptoms of irritation, and its vision was considerably reduced. At this period, December 11th, I ordered methyl-violet, $\frac{1}{10}$ per cent. dropped into the eye every hour, in connection with the sulphate of atropia, and, to my great delight, the next day, December 12th, I found the pupil dilated to more than twice its size of the day before, the congestion subsiding, the cornea clearer, and the vision sufficient to count fingers. The treatment was continued, and on the following day the patient was able to recognize a person across the room, pain was gone, redness less, and pupil widely dilated. December 15th, pupil wide open and vision $\frac{20}{80}$, eye fast recovering. The methyl-violet has quite a mydriatic effect, and also controls the power of accommodation. This fact I have verified many times by using it alone without atropia.

In the above case I feel confident that the methyl-violet from its diffusibility and germicidal effect on the pyogenic microbe, cut short the disease, and so saved the eye. I do not believe that in this case the mydriatic effect of the atropia could have been obtained without the methyl-violet; besides, the methyl-violet controlled the irritating effect of the atropia to the cornea and checked the keratitis.

The other case of choroido-cyclo-iritis occurred in a young man of 25 years, dark-brown eyes. A. B. P., from Junratia, Nebraska, a station agent on the Missouri Pacific Railway.

The history as gained from the patient was as follows: "While walking down the street, October 13th, with a pen-knife open in my hand, I met a friend, who, in play, knocked my hand with the knife so that the open blade pierced my right cheek, going into the eye, and the doctor put a stitch in the eye-ball, and assured me that the sight was very good, and there was but little pain, subsequently the eye began to pain, and I could not bear the light, and the sight gradually diminished and the pain grew worse."

An examination revealed a scar of the right cheek, lower lid, and eyeball. That of the eyeball about ten mm. long, about one-third of which extended into the cornea, from the inner inferior region, near the attachment of the inferior rectus muscle.

The cut of the cornea embraced the entire layers of the cornea, and evidently the blade went through the sclera and choroidal, though there was no evidence of its cutting the iris. The pupil was contracted, and the vision was not sufficient to count fingers, and photophobia intense. I ordered a 1-per-cent. solution of atropia to be dropped into the eye every two hours, night and day. The second day the patient was sent to my rooms. The mydriatic had not had the least effect. The ophthalmoscope revealed a grayish light colored body, with small, pale blood vessels mounting up over it, protected from the region of the ciliary body; and the sclera immediately exterior was swollen or bulged. There was evidently detached retina, with exudation beneath the retina. At this date I commenced the use of methyl-violet, and had it dropped into the eye every hour, night and day. On the following day there was some dilatation of the pupil, and less pain

and soreness. December 16th, I injected a $\frac{1}{10}$ per cent. solution (10 m.) into the eye through the sclera. The soreness has subsided, and the pupil is more open, although the exudations are much the same. Prof. Stilling speaks of injecting the vitreus of a rabbit without harm to the eye.

My experience so far has been, that the good effect from this agent is especially to be realized in inflammation of the deeper structures of the eyeball, owing probably to the great diffusibility and penetrability of the aniline traversing almost immediately the cornea and sclera to the chambers of the eye-ball, and having a predilection for bacilli and micrococci. In ulceration of the cornea I have used it with most excellent results in the form of pomade, 1 to 200.

For marginal blepharitis or tinea tarsi, the methyl-violet pomade, ½ per cent., carefully worked into the roots of the lashes by means of a spatula, works a speedy cure. Professor Stilling, from his bacteriological experiments, found that milk mixed with methyl-violet would not sour, nor would butter become rancid; that urine, even, could remain in a thermostat at 32° C. for a week without putrefaction or presenting any bacteria whatever. In fact, any substance containing a solution of methyl-violet of even 1 to 32,000, is absolutely aseptic. This agent acts as an antiseptic, killing the pyogenic bacteria, and from its diffusibility and non-destructiveness to tissues it is superior to other known antiseptics, and especially to the thermo-cautery, which is so efficient a germicide but can only be used at limited points.

1235 Grand Ave.

THE BACILLUS MALARIAE.

Dr. Bernardo Schiavuzzi according to the London Lancet, Dec. 20th, 1890, has communicated the results of some elaborate experiments. He obtained pure cultures of a bacillus, which agreed in its characters with that described by Klebs and Tommasi-Crudeli. With this he infected rabbits, producing intermittent fever of the tertian and quotidian types, enlargement of the spleen, formation of the characteristic pigment in the spleen, and the blood corpuscles presented the changes shown by Marchiafava and Celli to be pathognomonic of malarial infection.

Correspondence.

CONSTITUTION OF THE MEDICAL PRACTITIONERS' PROTECTIVE ALLIANCE.

Dr. J. H. DeWolf, of Baltimore, Maryland, sends the following suggestions for the establishment of a protective alliance:

ARTICLE I.

This Society shall be known as the United States Medical Practitioners' Alliance.

ARTICLE II.

The object of this Association shall be to maintain organized co-operation amongst practicing physicians who are legally qualified to practice in their respective States, and in good standing, for the purpose of protecting medical practitioners from the abuse of dispensaries that treat many who are able to pay; from the unjust competition caused by short term, quick graduating, and inferior medical colleges; to endeavor to promote the passage of just and equitable laws regulating the practice of medicine in all States so that the license to practice issued by any one State shall be valid in every other State; to devise means to enhance our financial condition (and thereby our usefulness) in every honorable way, and to derive the incalculable benefit that can only be obtained by combination and unity of action.

ARTICLE III.

The members of this Association shall exercise toward each other, toward all physicians, and toward all mankind that courtesy and just dealing to which every one in his legitimate sphere is entitled, and any departure therefrom shall be deemed unprofessional, undignified, and unworthy the honorable practitioner. It shall also be regarded as unbecoming to engage in any form of advertising or practice which shall tend to lower the physician in the esteem of the community or reflect discredit upon his professional associates.

ARTICLE IV.

The officers of this Association shall consist of a President, Vice-President, Treasurer, and Secretary, who will be elected annually. The seal of this Association must be stamped on all official papers.

ARTICLE V.

The fees for membership shall be three dollars on admission, and two dollars per annum thereafter. Delinquent members to be dropped for non-payment of dues whenever in arrears over two years.

ARTICLE VI.

Any member may be officially censured, invited to withdraw, or be expelled from membership for improper conduct or violation of professional comity. But it shall be necessary for a specific charge to be made in writing, with name of accuser, and a copy to be presented to the accused, or some person acting in his behalf, and another placed in the hands of the President or Secretary one month before the time of holding a regular meeting, when ample opportunity will be given for a fair trial.

ARTICLE VII.

That direct appeals be made by us as a body to the Legislatures of our various States from time to time as they may be deemed expedient, to secure the repeal of unjust or obnoxious laws which may be in existence, or the passage of laws that are vital to our success and welfare as a profession.

ARTICLE VIII.

That an effort be made to secure a law in each State that will secure the medical practitioner from the many losses he now sustains from those able to pay, but unwilling, and to make the physicians' claims in all cases a preferred one, which must be paid before the *pro rata* of an estate, as is now the law in some of the most enlightened countries of Europe.

Those desiring to join, please address Dr. J. H. DeWolf, 1600 Franklin St., Balitimore, Md.

KEFIR OR CAUCASIAN MILK WINE.

A correspondent from Vienna sends us the following *resumé* of investigations of Kefir or Caucasian milk-wine, as contributed by Dr. H. Weiss, to the Klin. Rundschau.

The Kefir prepared from cows' milk is a substitute not only for the kumiss of mares, but is even to be preferred to the latter on account of its taste, its price and its simple method of preparation.

Kefir, properly termed milk-wine, is no imitation but an ancient beverage in use among the Caucasian mountaineers.

Kefir equals milk plus alcohol, carbolic acid, lactic acid and hemialbuminose (propeptone).

The alcoholic and lactic acid fermentation of milk are produced by Kefir-ferment, which consists of yeast-cells and a species of bacteria, Dispora Caucasica.

In the employment of Kefir, diuresis is promoted and the urine (poorer in fixed constitutents) is diluted; the aggregate metabolism is retarded.

Kefir is no specific for any disease, but is an excellent, readily assimilable nutrient, at once tonic and stimulating.

The appearance of patients is not only improved, but with the regular employment of Kefir the bodily weight increases.

In convalescence, in chronic catarrh, in stomach and intestinal ailments, in cirrhosis hepatitis and in pleuritis, Kefir, is an excellent nutrient; ulcus ventriculi, it is hardly to be replaced; in chronic Bright's disease, it is the most appropriate nutrient, and possesses virtue in scurvy.

Kefir renders good service in the treatment of children's diseases.

Kefir is also beneficial to the healthy and would be of service, if made more accessible to the people, in reducing the evils of alcoholism.

Kefir is especially in place where milk is contraindicated, or where the latter is not born by the stomach. The question, why do we not content ourselves with milk, is to be answered by the apt expressions of Lépine, who says, "Owing to the motive which has prompted man to transform the juice of the grape into wine,—in a word, to introduce art into the preparation of his aliments."

The University Medical Magazine.—

It is announced that the size of this journal is to be increased from 16 to 24 pages, under the direction of Drs. William Pepper, James Tyson (medicine), D. Hayes Agnew and J. William White (surgery), Horatio C. Wood (therapeutics), William Goodell (gynæcology), and Barton C. Hirst (obstetrics).

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

SURGEON-GENERAL SUTHERLAND.

Colonel Charles Sutherland, Surgeon U. S. Army, has been appointed Surgeon-General, with the rank of Brigadier-General, vice Jedediah H. Baxter, deceased. General Sutherland entered the military service August 5, 1852, as Assistant Surgeon, having been appointed from Pennsylvania. He has been in continuous service ever since, and brings to his new position as Surgeon-General a rare equipment in experience and personal fitness.

The medical and lay press are united in their expressions of congratulation on the fitness of the appointment.

Geo. W. Childs in the Philadelphia Ledger, who voices the general sentiment, pays a high tribute to the new Surgeon-General.

"From among the meritorious names before the President for appointment to the vacant Surgeon-Generalship of the United States Army he selected that of General Charles Sutherland, the Senior Surgeon of the Medical Corps. In making this appointment the President adhered to the rule of giving preference to seniority—always a just rule, and to be honored in the observance, unless there are clear and conclusive reasons for setting it aside.

But, rule or no rule, General Sutherland has earned the promotion by honorable and meritorious service on the field of battle, as well as in the hospital—in war as well as in peace. He is a diffident and reserved man in all matters of mere personal preferment—quite as reserved in such matters as he is forward in all matters in the line of his professional and military duty—and so it may be assumed that his promotion to the Surgeon-Generalship is due entirely to his creditable and honorable record."

THE INHALATION METHOD IN THE TREATMENT OF PHTHISIS PULMONALIS.

We present in this issue an article by E. L. Shurley, M.D., published in the Harper Hospital Bulletin for December, with illustrations of the apparatus necessary for the adequate employment of this method.

In view of the papers previously published by Dr. Shurley and Dr. Gibbes in the Philadelphia Medical News, and American Journal of the Medical Sciences, on the inhalation of medicaments as a remedial measure in consumption, and the special attention now being given to curative methods of tuberculous processes, it is believed these additional notes of this method will be of interest to our readers.

AN INSTITUTE FOR PREVENTIVE MEDICINE.

In view of the efforts made by the present generation of medical men to prevent disease the humanitarianism of the medical profession can never be questioned.

France has its Institute Pasteur; Germany its Hygienisches Institute, and now a strong effort is being made to establish a National Institute of Bacteriology in England, and Cambridge has been selected as its site, London for many reasons being ineligible. Among the committee appointed to aid in securing the proposed Institute are the following well known names: Sir Joseph Lister, Sir Andrew Clark, Sir Spencer Wells, Sir George Paget, Sir James Crichton Browne, Professor Humphry, Professor Roy, Professor Victor Horsley, and such representatives of pure science as Sir Henry Roscoe and Professor Ray Lankester, together with others who are interested in the veterinary and agricultural bearings of bacteriology.

The British Medical Association has recommended a first annual subscription from the funds of the Association of £300, and Mr. Ernest Hart, one of the Trustees of the Institute, has offered £100 a year for five years if four others will give the same.

It is rumored, also, that a Pasteur Institute for bacteriological research is to be established in New York City, under the auspices and patronage of some of its wealthiest citizens, and it is to be hoped that the impetus given to research in this now interesting field will lead to discoveries of great value.

A POSSIBLE SPECIFIC ORGANISM OF CANCER.

Dr. W. Russell recently read a paper before the Pathological Society of London, on the Characteristic Organism of Cancer which has given rise to much discussion.

While he does not claim to have isolated a specific germ which has been determined to be the cause of the development of this dread disease, his researches are most interesting, and any light on this important question of the etiology of cancer is to be welcomed.

According to the British Medical Journal report, Dr. Russell is undoubtedly of the opinion that the organism he describes is not a psorosoperm, but is one of the yeasts or sprouting fungi. He thinks, indeed, that he has been able to demonstrate in his sections the actual budding that is so characteristic of the vegetative multiplication of the yeast cells. Whatever may be the outcome of this work, Dr. Russell has placed on record an admirable method of staining, and so demonstrating certain protoplasmic bodies, which, although probably previously observed, have certainly been misunderstood; and it is quite possible that as a result of this improved method of staining some of these bodies, the structure of which we have hitherto not been able to make out accurately, and which, for want of a better name, have been spoken of as "psorosperms," will now have to be reclassified and spoken of as "yeasts."

Dr. Russell does not claim to have proved any causal relationship between his fuchsin bodies and cancer, but after eliminating all fallacies, as far as he was able, he places his results before his fellow-pathologists in order that his observations may be confirmed or corrected. There can be little doubt that in a very large number of cases these organisms are present wherever there are large masses of epithelial tissue; and even in the short interval since Dr. Russel's paper was read, several observers, who have not yet, of course, had time to publish their results, have confirmed his statement that these organisms are present in such epithelial masses in cases of cancer.

The Medical Press and Circular, briefly states Dr. Russell's observations and results as follows:

In the course of a series of researches having in view to trace the mode of growth of cancer in different organs, he found that by employing a special combination of stains he obtained certain appearances which he could not fit into any known modes of cell growth and cell proliferation. By treating these sections with fuchsin and then with iodine-green, without passing them through any special decolorizing agent, the iodine-green replaced the fuchsin in everything with the exception of certain bodies. The next thing of course was to make sure that these appearances were not due to some accidental circumstance, and, having established that, to eliminate the possibility of their being the nuclei of tissue cells in exaggerated formative and reproductive activity; and lastly, to distinguish them from some rare process of degeneration. That they were not the result of any accidental contamination was easy enough to show, for no such appearances were to be obtained in tissues of other kinds, though preserved in the same fluids, prepared in the same way, and stained with the identical agents. Then every imaginable form of degeneration was put to the test without yielding the typical appearances, and even the sarcomata failed to react except in one instance, in which, however, the accuracy of the original diagnosis was open to question. Further examination demonstrated their absence from simple tumor formations, though here again there were isolated discrepancies only to be explained by the assumption that the specimens had been wrongly designated. It is worthy of note that it was only in the cases in which a doubt was permissible as to the nature of the growth, though clinically regarded as non-malignant, that these appearances were detected. They were found in one or two cases of supposed syphilitic ulceration, but in both instances the lesions were characterized by an utter unamenability to anti-syphilitic treatment, so that it is possible that, as suggested, the syphilitic lesions may have been associated with a more serious process. In all the tissues from some fifty or sixty independent cases were examined, several sections from each having

been stained in the manner described, for the purpose of subjecting the observations to the severest possible test. The result was that these bodies, to which Dr. Russell has given the provisional name of "fuchsin bodies," were found in one case of chronic ulcer of the leg, one of tuberculous disease of a joint and one of phenomenally severe and intractable syphilitic ulceration, together with one specimen described as adenoma of the mamma and another of gumma of the meninges. So much for the check observations. Out of forty-five cases of undoubted cancer, portions of which were submitted to this treatment, the specimens being taken just as they presented themselves, the fuchsin bodies were found in all bnt two, and as these two specimens dated from 1885, their pathological position was regarded as uncertain, no record bearing thereon being obtainable. An attentive consideration of the behavior of these bodies to reagents leads Dr. Russell to favor the view that they belong to the class of "sprouting fungi," the *Sprosspilze* of Nägeli. This class of fungi includes the yeast fungus, and theoretically the changes which the nutrition, reproduction, and death of this fungus might be expected to bring about would involve morbid phenomena, not disproportionate in magnitude to the anatomical changes present in cancer.

IMMUNITY FROM INFLUENZA SECURED BY VACCINATION WITH ANIMAL LYMPH.

If we are to credit the report of Dr. Julius Goldschmidt in Berliner Klinische Wochenschrift, Koch's lymph is not the only one which can decrease the mortality rate. Dr. Goldschmidt, who is a resident of the Island of Madeira, reports that he met with the first case of influenza on this benign isle on New Year's day. It was that of a lady who had arrived from France. She had been ill before departure, grew worse during the journey, and came under his treatment while suffering from febrile broncho-pneumonia. Her maid was also taken sick during the journey, in the same way. Both cases progressed favorably, and their duration was comparatively short.

From this date the number steadily increased, the cases being mild at first, and later more severe.

A grave epidemic of small-pox also spread in the rural districts surrounding Funchal, the capital of the Island of Madeira. Although compulsory vaccination is required by the law of Portugal, the larger part of the population, especially the lower classes, evade this obligation, partly from the indolence characteristic of the country people, partly from religious superstition and fatalism. For this reason, epidemics of small-pox may give rise to great devastations upon this island; the one before the last claimed 1,000 victims out of a population of only 100,000 inhabitants. In a village situated on the southwest coast, in which several cases of small-pox had appeared, in the absence of a physician, a female quack, such as is often found in the country, performed vaccination, from the scales of a sick child, upon a large number of children, and the result was a sudden and very grave spread of the epidemic, and its rapid invasion of other districts of the island.

Although Dr. Goldschmidt had performed vaccination before, he now proceeded about it on a larger scale, exactly at the time when the influenza epidemic was making rapid headway. From this coincidence he was enabled to make the interesting observation *that the individuals successfully re-vaccinated were not attacked by the influenza*. His observations comprised 210 cases of re-vaccination, of which 112 were successful. Of the remaining 98, only 15 suffered a mild attack. The following case was especially instructive and convincing:

In an isolated villa, with a very large household—26 persons—all those not re-vaccinated were attacked (five strangers and eight natives), two of them dangerously, while the other twelve re-vaccinated (nine of them successfully) were altogether spared.

Thus we can now account better for the fact that children, and especially those of the most tender age, enjoyed an immunity, as their recent vaccination formed a sufficient protection against the influenza as well.

To those physicians who vainly combatted the epidemic of *la grippe* which so recently devastated the world, these facts must prove of interest, especially in view of the reports that come from abroad as to the possibility of another invasion of epidemic influenza.

Notes and News.

Tracheal Injections as a Way of Administering Remedies.—

In view of the possibility of the advantages which the trachea may offer to the introduction of remedies for the treatment of respiratory diseases, it is worth while to note the report of M. Botey, before the Académie des Sciences. The trachea is not popularly supposed to be willing to tolerate quietly the introduction of foreign liquids, but it has been shown that if the larynx be first anæsthetized with a ten-per-cent. cocaine solution, that, by means of a suitable syringe, water and solutions of various drugs may be introduced without exciting unpleasant symptoms. M. Botey injected two and a half drachms, and after eight days about an ounce of distilled water into his own trachea without discomfort or coughing. His respirations were increased from seventeen to twenty-one, and his pulse from seventy-one to eighty-two. In a woman who had syphilis affecting the larynx and trachea, three drachms of a one-per-cent. solution of iodide of potassium were injected, and after a few days six drachms of this solution, containing also one-twenty-fifth of a grain of bichloride of mercury, were given in this way on every other day. These injections were repeated seventeen times successively. The treatment was well borne, and the patient made a good recovery. The only phenomena which were observed after these injections were a diminution in the number of respirations from twenty-three to eighteen per minute during several hours.—*Le Mercrédi Médicale*, No. 30, 1890.

Koch the Hero of a Five-Act Drama.—

Koch has surely taken the world, so to speak, by the ears. It is quite natural that he should be considered a hero, but scarcely so in the acceptation of the term as applied to the stage. However this may be, our readers will probably be surprised to learn that he has already become a stage hero. At Arad, Hungary, a dramatic author has completed a five-act drama which takes its subject from Koch's discovery. The different parts have been distributed to the actors of the Arad Theatre, and in less than a week Koch will be represented on the "boards" in that city. We presume that somebody is cast to play the part of the tubercle bacillus. Judging from precedent, this part will be made to represent the villain of the piece. Under the circumstances the dialogue between the actors respectively representing the tubercle bacillus and Koch, should prove entertaining. Of course, like all stage heroes, we take it that Koch will prove triumphant in the end; and this is nothing more than what our distinguished *confrere*, whom the profession is only too proud to honor, deserves. Still, we are probably only expressing his sentiments when we say that he would have preferred not to have been "dramatized."—*Med. Press and Circular*.

Visual Disturbances Due to Malaria.—

Sulzer (Klin. Monatsbl. f. Augen., July, 1890) has made an exhaustive study of the affections causing disturbance of vision which are more or less directly referable to malarial poisoning. He divides them into two categories. The first includes the cases connected with a malarial cachexia. The second embraces those characteristics of the acute febrile attacks. In the first are: Chronic optic neuritis, leading, the bad cases, to melanosis of the papilla; diffuse infiltration of the vitreous; hæmorrhagic extravasation in the peripheral portions of the retina (these, according to Poncet, are always met with in individuals dying from malarial cachexia); sudden and incurable blindness, due probably, to cortical hæmorrhages or embolisms. In the second category are: 1. Periodic amblyopia without any ophthalmoscopic changes. The degree of the amblyopia is variable, but in some cases may amount to complete amaurosis lasting for several days, and yet followed by complete recovery on using quinine. 2. Venous hyperæmia of the papilla and retina. 3. Large hæmorrhages in the neighborhood of the papilla and macula.

Colchicine Poisoning.—

Dr. Millot-Carpentier, in the Union Médicale, gives an account of a case of poisoning with this drug, a report of which Dr. Giulio Sprega recently published in the Gazetta Degli Ospitali. Cotoine had been ordered

for the patient, who had been a sufferer for several years with chronic intestinal trouble. By mistake, colchicine was given. Alarming symptoms of violent gastro-intestinal irritation soon followed; the pulse failed rapidly, there were involuntary stools and constant vomiting, and death occurred in four hours, notwithstanding every effort being made to control the symptoms. Before death, the skin became insensible to the Faradic current. The autopsy revealed cutaneous emphysema, diffuse fatty degeneration of the liver, and mitral insufficiency. Under the mncous membrane of the stomach there was a blackish material, and in the intestinal canal there was a marked inflammatory condition with hæmorrhagic spots.

A Christmas Sentiment Regarding the Medical Profession.—

The following seasonable tribute to our profession may be found in the Christmas number of All the Year Round in a story by Fargeon: "Surely there must be some beneficent influence at work that humanizes and softens the heart, that makes it respond willingly and cheerfully to the appeals of those who suffer! Numberless are the instances that can be adduced of the wonderful goodness of physicians, renowned and eminent, who sacrifice their time without expectation or desire of return for the inestimable services they render. I have no hesitation in saying that of all arts it is the most ennobling and beautiful, and that its record of kind deeds is matchless and unapproachable. With all my heart I say, 'Heaven bless the doctors for all the good they do, for the good they are enabled to do.'"—*N. Y. Med. Jnl.*

The Recognition of the Gonococcus.—

Steinschneider (Centralbl. f. d. med. Wissensch., 1890, No. 39, 710) maintains, in opposition to a statement of Fürbringer's, that the application of the Gram method of staining microörganisms is necessary to the satisfactory study of the gonococcus, inasmuch as the only positive characteristic of this coccus is that it is not stained by this method, while nearly all other diplococci found in the urethra are colored thereby.

These conclusions, which agree with those of Roux, are the result of the examination of eighty-six patients with acute and chronic gonorrhœa. The almost entire certainty of this test is rendered absolute by the observation of the further character of the gonococci, namely, that they are found within the pus-cell.

Hot Water to Facilitate Absorption of Drugs.—

The Medical World says if you want a sure, speedy action from your drugs as if you gave them hypodermically, administer them in hot water; one-half the dose will have the effect. The reason is obvious. If the dose be given in hot water it is quickly absorbed, and the force of the drug thrown upon the system at once. Few people realize how long the dose will remain in the stomach if that viscus be chilled. Beaumont found that a glass of ice water stopped digestion for one hour. This method of administration is particularly suitable for vegetable preparations, opiates, etc.

A New Process of Cremation and Mummifying has been proposed in France, based upon the well-known and successful experiments in plating with copper or other metals, by means of electrolysis, the most delicate tissues of grasses, leaves, and skins. Certain Frenchmen have, as an experiment, actually plated a dead child. The result is a perfectly faithful statue of the subject, truer to life than any sculptor could hope to achieve. The metallic shell is strong enough to withstand shocks. To receive the electroplating of copper, aluminium, or gold, as the case may be, the skin is prepared by a bath of nitrate of silver, and the silver reduced upon it by the vapor of phosphorus. There are also various other ways of providing the necessary "electrode" on which to deposit the coating.

Standing Bareheaded at Funerals.—

The London Lancet deprecates the practice of remaining bareheaded at funerals. It commends the propriety of cutting short the burial services in cold and inclement weather, and suggests that the hats should be kept on the heads of those in attendance. These suggestions should certainly be approved of, for a funeral ceremony, as at present carried on, involves much risk of contracting grave inflammation of the respiratory organs.

Therapeutic Brevities.

Croupous Pneumonia in Children, and Its Treatment.—Copasso (Arch. Ital. di Ped., 1890) states that between the first week and the sixth year of life, children are very susceptible to this disease. Those are especially predisposed to the disease in whom the thorax is undeveloped relatively to other parts of the body. Cutaneous erythema upon the trunk is one of the first symptoms, especially in severe cases, and is probably due to obstruction to the flow of blood toward the thoracic cavity. To the vascular obstruction are also due the albuminuria of the disease, the congestion of the liver, the spleen and the brain, the softness of the tissues offering no opposition to the dilatation of the capillaries. In cerebral pneumonia the morbid process is usually limited to the left apex, while there is also œdema of the pia mater. The posterior portion of the lung is more decidedly affected than the lateral or inferior portions. Cardiac weakness may follow the disease, and the pulmonary vesicles very slowly resume their original form and volume. Caseation and tuberculization of the exudate in such young patients are rare, and so also are induration, suppuration, and gangrene. It is believed by the author that the theory of the infectious origin of the disease is a correct one. Salicine may not be given with safety at this period of life. Leeches may be used with advantage to the painful portions of the chest. Excitants of the nervous system and the heart, including red wine and quinine, also expectorants, may be prescribed.

New Treatment of Sympathetic Ophthalmitis.—Dr. Abadie, of Paris, partly from theoretical considerations suggested by the now very generally accepted view that sympathetic ophthalmitis is micro-organismal in its nature, and partly owing to the success which he claims has attended the practice where it has been tried, recommends the following treatment in cases of threatened or actual sympathetic mischief. In the first place enucleation, formerly so freely resorted to, should, in his opinion, be reserved for very exceptional cases in which the injury to the eye has been so severe as to leave no possibility of any vision being restored. Even in cases of very serious injury, in which, notwithstanding the adoption of antiseptic precautions, a sympathetic ophthalmitis has resulted, Dr. Abadie, before proceeding to enucleation, recommends the use of the actual cautery applied freely to the wound, followed by the injection of one or two drops of a solution of corrosive sublimate (1:1000) into the eye. In this way he has succeeded frequently not only in checking the sympathetic inflammation, but in improving the state of the exciting eye as well.

Finally, in cases where, in spite of everything, *i. e.*, treatment without or by enucleation, the second eye continues to become disorganized, he recommends attempts at hastening the quieting of the process of inflammation by injecting the same solution into the eye before performing any operation. —*Annales d' Oculistique*, April, 1890.

Apples in Dipsomania.—Dr. R. B. L. Triplett (Med. Bulletin) calls the attention of the profession to a fact that he has been experimenting on for years, as follows:

I first noticed (he says) that those who were habitual drinkers of alcoholic liquors very seldom ate apples, and by applying this hint clinically, found that a diet composed largely of good, ripe apples (of the tartish variety, preferably) greatly diminished the desire for the accustomed stimulant. In truth, of late years, I always insist, when treating dipsomaniacs, that apples shall be taken with meals and between the meal hours, and find that where it is kept up the desire for alcoholic stimulants soon becomes *nil.*

I have used strychnine and other vaunted remedies in dipsomania, but have had more satisfaction, and much more brilliant results, from the apple diet than from any remedy in the materia medica.

Would like other physicians to give it a fair trial and publish their results. Of course other nourishment is given, only I insist that apples be taken as above. Some of my cases are those in good circumstances; others of those of the poorer class.

Copaiba as a Diuretic.—Dr. Obolenski, writing in a Russian journal, remarks that balsam of copaiba is now less used as a diuretic than it deserves to be. He prescribed it with success in several cases of ascites and very pronounced anasarca, mostly due to mitral or aortic insufficiency or to cirrhosis of the liver. The diuretic action usually manifests itself twenty-four hours after it has been taken, and continues some time; in some cases it lasts from two to three weeks. It often acts more energetically than other common diuretics—such as digitalis, convallaria majalis, adonis vernalis, etc. Dr. Obolenski has occasionally observed secondary symptoms from the use of this drug, such as pyrosis, pains in the bladder, looseness of

the bowels, or slight hæmaturia. In all these cases the disagreeable effects of copaiba quickly disappeared, and did not oblige him to stop the drug. Dr. Obolenski has never remarked urticaria or affections of the respiratory passages. He prescribes the balsam as an emulsion, the quantity ordered being from 18 to 36 grains *per diem*. It apparently exercises a tonic effect on the heart. It does not raise the blood pressure, nor does it alter the pulse rate. It augments the diuresis, either by dilating the renal arteries or by acting on the renal nerves so as to increase the secreting power.

The Raw Throat of Dyspepsia.—Cases of symptomatic cough without physical signs present themselves to every chest clinic. The patient generally reports, also, some pain in the sternal region and under the left scapula; constipation frequently a concomitant. Such cases are dyspeptic in origin, and the cough is popularly known as "stomach cough;" pyrosis may be present with or without regurgitation and a bitter taste in the mouth, and other signs associated with dyspepsia. If the throat is very raw or sore, and the soft palate relaxed, the following gargle may be ordered:

Sulphate of zinc,
Carbolic acid, ää 4 grains.
Glycerin, 4 drachms.
Water, 3½ ounces.

M. Use as gargle three or four times daily.

This is a favorite at the University of Maryland clinic, and is known as "McSherry's gargle" from its originator, Dr. H. Clinton McSherry, of Baltimore. Internal treatment by means of tonic or antacid remedies will also be required in many cases.—*Jour. Amer. Med. Association.*

Euphorbia Pilulifera for Asthma. — Dr. John Aulde in an article in the Jnl. of the Amer. Med. Association commends these formulæ for relief of asthma, viz:

For hypodermatic use the following was employed:

℞ Morphinæ sulphas., gr. 1-4.
Atropinæ sulphas, gr. 1-150.
Trinitrin, gtt. 1.

M. Sig.—For subcutaneous use; for one dose.

The formula adopted for the exhibition of euphorbia was as follows:

℞ Ext. euphorbæ pilulifera (P. D. & Co's.).
Glycerini, ää fl. oz. ij.

M. Sig. — Take one teaspoonful every three hours.

Treatment of Frost Bite (M. Brocq).—

1. Bathe the hands in a decoction of walnut leaves; dry.
2. Friction with camphorated alcohol.
3. Powder with the following:

Salicylate of bismuth, 150 grains.
Starch, 1,350 grains.

4. To calm the itching, rub with:

Glycerin,
Rose water, ää 12 drachms.
Tannin, 2 grains.

Then powder with No. 3.

5. If ulcerations exist, envelop with walnut leaves soaked in hot water.—*Revue de Thérapeutique.*

Suppositories for Dysmenorrhœa.—M. Farlow recommends the following formula:

℞ Extract of cannabis Indica, 0.015 (gr. ¼).
Extract of bellad., 0.015 (gr. ¼).
Butter of coca, 50 grammes (℥ 1½).

M. Sig.: For one suppository. Five such are to be made. Insert one suppository every evening, to begin five days before the menstrual period.

—*Revue Obstëtricale et Gynécologique.*

A New Method of Nasal Irrigation.—Pins, of Vienna (Mercredi Médical, April 20, 1890; Rev. de Lar., etc., August 15, 1890) uses a small Wolf bottle, to the longer tube of which a mouthpiece is attached by rubber tubing, while a nozzle is similarly attached to the short tube. The patient blows the liquid in one of his nasal passages, and, as the forced expiration occludes the rhinopharynx, the liquid escapes by the other nostril.

A Styptic for Hœworrhage After Extraction of Teeth.—Dr. Kirchner, of Koenigsberg, Prussia, recommends in No. 8 of the D. Mon. f. Zahnaerste, the employmeut of Penghawar wadding as an excellent styptic after the extraction of teeth. It should be pressed into the alveoli, and compresse dwith the finger for about half a minute.

Formula for Vaginitis.—

℞ Sozoïdol of sodium, 10 grammes (℥ iiss).
Lanolin, 100 grammes (℥ iij–℥ j)

M. Sig.: Unguent.

—*Gazette de Gynécologie.*

Medical Progress.

Treatment of Hepatic Colic.—In a recent number of *La Médecine Moderne*, Professor Germain Sée discusses the always interesting and important subject of the treatment of hepatic colic. The obvious primary indication is to promote the expulsion of the gall-stone, and this, Professor Sée urges, should be accomplished by remedies which increase the flow of bile. The sufferings of the patient are, however, usually so intense that we are compelled to consider first the application of measures directed to the relief of pain. Of these by far the most speedy and effectual is the hypodermic injection of morphine. This usually acts very well, but Professor Sée warns us that in some cases the patients, after a fit of vomiting, fall into a state of alarming collapse, even when only one centigramme of morphine has been injected. We must also bear in mind that morphine is one of the substances which diminish the biliary secretion. Of antipyrin Professor Sée says that "it will only render mediocre services in this matter, and that we should not lose time by prescribing it." Chloral and chloroform have a less certain action than morphine, but possess the advantage of not hindering the secretion of bile. Professor Sée advises that chloral, if used at all, should be given by enema, as it will not be well tolerated by the stomach. He is disposed to believe that both chloral and chloroform may act favorably by relieving spasm and promoting the relaxation of the walls of the bile-duct.

The second and most scientic indication is to increase the biliary secretion. The mere presence of the gall-stone, and the irritation which it excites, have a tendency to augment the flow of bile, but help may be obtained from the use of various medicinal remedies. Of cholagogues Professor Sée enumerates bile itself, turpentine and its derivatives, terpine, terpinol, benzoic acid, salicylate of soda, and olive oil. He points out that bile is inadmissible, as its employment tends to make the biliary secretion thicker rather than to render it more fluid as is desirable. Turpentine and its derivatives are comparatively inefficient cholagogues, but are nevertheless of some value. The "Durande remedy" owed its success to the presence of turpentine. Of two only of the remedies enumerated does Professor Sée hold a high opinion—viz., salicylate of soda and olive oil. The cholagogue action of the former of these, although pointed out by Rutherford, is hardly sufficiently recognized in this country. It seems to increase the entire biliary secretion, but more particularly its fluid elements. According to Professor Sée, it not only acts as a cholagogue, but has also an analgesic effect, which is obviously desirable in the condition under consideration. It is advised that salicylate of soda be given with large quantities of fluid as this seems to assist it action.

The cholagogue action of olive oil has been a subject of dispute, and was denied by Bidder and Schmidt. The later experiments of Rosenberg, however, seem to show that if the animal experimented upon be kept upon a normal diet, and olive oil be administered, "a considerable augmentation of the biliary secretion, especially of its fluid part, begins in from thirty to forty-five minutes, the maximum increase is obtained from the third to the fifth hour, and there is also a considerable increase of fatty acids which are capable of dissolving cholestearine." Professor Sée believes that clinical experience proves that the administration of olive oil both promotes the removal of gall-stone and relieves the attendant pain and jaundice. Its *modus operandi* has been the subject of some fanciful theories. Thus it was at one time supposed that the oil actually ascended the duct and acted locally upon the impacted gall-stone. For this idea there was never any adequate foundation, and it must suffice to say that the administration of olive oil tends to increase the flow of bile and to make it more liquid. The chief objection to this line of treatment is that the oil is often badly tolerated, and that even if it be well borne at first, intolerance is quickly excited.

Professor Sée finally discusses the remedies that are contraindicated in an attack of biliary colic. Chief among these are those medicaments which tend to excite strong peristaltic movements of the intestine, as these are apt to be propagated to the bile passages. Hence strong purgatives are injurious. Purgation should only be employed after the crisis is over, and even then with caution, as it may excite a fresh attack. Nevertheless, it cannot be wholly dispensed with, as it is desirable to clear out the bile that has found its way into the intestine. We should also avoid those substances which diminish the biliary secretion, of which Professor Sée enumerates the salts of potash, calomel, iron, copper, morphine, atropine, and strychnine.

These recommendations coming from so esteemed a source, and founded upon such ample physiological experiment and clinical trial—will be received with the respect which they deserve. Probably the point which runs

most counter to ordinary practice is the advice given in regard to the use of purgatives. At the crisis of the malady, when the duct is contracting violently and the patient is in extreme agony, no one would dream of giving a purge; but a little later on, when the pain has been subdued, while the impaction remains and jaundice is deepening, moderate purgation with such an agent as Glauber's salt has often proved the most efficient of all methods of treatment. Turpentine does not seem to justify the hopes that, on theoretical grounds, were raised regarding its value in biliary colic. Salicylate of soda and olive oil are well worth a trial, and Professor Sée's recommendation will ensure their wide employment. Whatever medicinal remedies we select, it seems evident that copious draughts of warm water, to which a little soda has been added, are invariably advantageous, and it is well that so simple a measure should not be overlooked or neglected because of its simplicity.—*London Lancet.*

Eucalyptus Globulus.—Whilst writing this I am surrounded on all sides with plants of eucalyptus globulus, from the tiny seedling a foot high to the huge blue gum (as the tree is known here) towering up some 300 feet. The medicinal virtues of its leaves have been long known, the aboriginal inhabitants of our beautiful island knowing of and using them for various troubles. But our knowledge has never, so far as I know, been tabulated, and we labor at great inconvenience in prescribing it. The Bushmen often tell me of cures "by blue-gum leaves." One has applied the raw leaves to patches of rash; another has kept a joint affected with rheumatism enveloped in them; mothers tell of wonderful cures of diphtheria by enveloping their patients in clouds of steam from hot leaves covered with boiling water; other people, again, swear by infusions of the leaves taken in wineglassful doses for all sorts of internal troubles. In fever cases nearly everybody hangs them about the bedroom of the patients, and in various lung troubles the leaves are burnt or smoked so that the patient inhales the smoke. We have a great variety of eucalypti, most of which are found in the other colonies, but Tasmania is the home of the eucalyptus globulus; indeed, it is very doubtful whether it is indigenous to any other country, only stray plants occurring in Australia, and our Bushmen never dream of using any other variety as a medicine. When held up to the light the essential oil is seen in tiny globules scattered thickly through the leaf cells, and the most active medicinal properties appear to exist in this oil. Hitherto but little opportunity has been given to test the medicinal powers of eucalyptus globulus, as practically none has found its way into the market. The eucalyptus oil sold is said to be distilled from "the leaves of eucalyptus amygdalina as well as eucalyptus globulus, and probably other species." A man who had worked for years in various Australian distilleries told me that he had seen but two eucalyptus globulus trees, and they were carefully preserved to show visitors. But our people would no more think of using peppermint (eucalyptus amygdalina) for their ailments instead of blue gum than your people would use oak instead of senna leaves. The peppermint is quite unknown here as a medicine; it grows as a low shrub or stunted tree on dry, rocky hills, with thin small leaves, which are rich in its peculiar camphorous oil. But the eucalyptus globulus luxuriates in wet ground produces large scimitar-shaped leaves, and is in many ways the true "fever" tree. It contains but a small percentage of oil, and the oil is difficult to extract, but when obtained it is very superior to that from other eucalypti. Hang a bunch of other eucalypti, such as E. amygdalina, in a bedroom, and a bunch of this in another, and one soon recognizes by the smell and air of the room the difference in the two.

For some years medical men in Tasmania have been using eucalyptus globulus in medicine, and with excellent results. The following occurred in my own child, aged two. For four months she lay ill with infantile remittent fever, until she was reduced to a little skeleton, which we carried on a pillow. A chart of her temperatures lies before me, but far too long to copy. The chief feature is its irregularity. One day a high morning temperature would be normal by night; on another day it would be highest at noon; another day would follow with a normal morning and mid-day temperature, to rise to 103° at night. Thus it ranged from normal to 104° all through the four months, with anorexia, constipation, chills followed by sweats, etc. Every drug I could think of was tried, with Pack's graduated bedroom temperatures, diet, etc. Over and over again did we return to quinine, arsenic, etc., but they seemed to have no effect whatever. Searching through various materia medica, I dropped upon an article in an American book on eucalyptus globulus which seemed to fit the case. Some blue-gum leaves were soon obtained, and a rough infusion made and given in teaspoonful doses. The first dose seemed to break up the fever, and with the exception of a

little rise in temperature for one day a week afterwards, she had no return until a year later, when she again sickened, and after other remedies had failed, blue gum again asserted its power, and she has since been strong and robust. Since then I have been constantly using it in fever cases taking on a remittent type. In the latter stages of typhoid, when relapses are so troublesome, it does better than any drug I have yet seen, not only acting on the fever, but I believe by its antiseptic power helping to destroy the fever germs in the system. For these cases I give teaspoonful doses of an infusion of the leaves every two hours; perhaps the oil may do as well, but I do not take kindly to it in these cases. In nasal catarrh the oil seems to me to act as a true antiseptic when sniffed up the nose as vapor, or just a few drops into the palms of the hands sniffed up strongly It is gaining great repute here for stopping these colds. When I find one coming on I carry a small bottle in my pocket, and take a few good sniffs occasionally as I drive along. In the essential oil we notice a great difference in smell, taste, and other characters between eucalyptus globulus oil and peppermint. That from eucalyptus globulus is an oil, the other is more spirituous in character, and for rubbing into rheumatic joints is far preferable. For injections the eucalyptus globulus to my mind is by far the best. As previously mentioned, for fever cases I like an infusion of the leaf as the purest preparation of the drug I can get, and when using the oil I like the first distillate. After rubbing up a green leaf between one's fingers, a sticky, oily feeling remains, and the first distillate of eucalyptus globulus is very like it; this to my mind contains valuable properties which are damaged or lost in treating with potash redistillation, etc. Other medical men here have had large experience with these eucalypti, and they tell me they always use eucalyptus globulus when giving it for fevers. Mr. Hardy gave me a striking case of scarlet fever which he treated by putting the patient in a hot eucalyptus globulus bath when she seemed *in extremis*, and with excellent results. In diphtheria it not only acts as a germicide and antiseptic to the throat, but helps to break up the relapses of fever I am now trying it on ringworm, leucorrhœa, etc., but my observations have not been sufficiently careful to warrant any statement of its virtues in these affections.—Harry Benjafield, M. D., in London *Lancet*.

Disturbances of Ejaculation.—Affections of the male sexual organs, which involve, or appear to involve, the generating power of the patient, are frequently extremely difficult to treat. The cause of this is perhaps oftener to be sought in the patient himself than in the local disorder; in other words, the trouble is with the mind and general nervous system rather than with the sexual apparatus. If a man gets an idea that, as the result of spermatorrhœa, or gleet, or premature ejaculation, or some other disorder, he is impotent or sterile, it requires all the authority and tact of a wise physician to accomplish much towards his restoration to health. Confidence in the attending physician is all important. If the patient can be brought to leave the thinking about his case to be done by his physician, and get rid of his morbid self-contemplation, half the battle is won.

Quacks and physicians with more reputation than character have done much to exaggerate the significance of sexual disorders, and even those who can have no object in deceiving have spoken with unwarranted positiveness in regard to these matters. Thus Alfons Hanc, of Vienna, in an article published in the Allg. Wiener med. Zeitung, No. 29, 1890, declares that "a well-timed successful ejaculation of human semen is without doubt the most essential element of the act of copulation, and is almost as a rule a *conditio sine qua non* of the generating power in man." As regards the latter part of this statement, it should be remembered that the spermatozoa alone are the essential elements, so far as the man is concerned, of fecundation. These retain their motion for at least twelve hours outside the body, when the semen is kept in a test-tube, and in all probability live for several days in the secretions of a healthy vagina. There is some reason to believe, it is true, that at the height of the sexual orgasm the mouth of the womb opens, and perhaps even at such times the semen is sucked up into the womb. But the normal os that will admit a sound will certainly admit active spermatozoa at any time, and if so, what is to prevent the fecundation of an egg, if one is present? The statement of Hanc is too sweeping, and needs qualification. Coitus with ejaculation at the height of the orgasm is possible to sterile men, that is to say, men whose semen contains no spermatozoa, or only dead ones; and, on the other hand, men with varying degrees of impotence, but with living spermatozoa in their semen, are capable of begetting children.

It is quite true that perfect coitus implies successful ejaculation at the proper time, but it does not follow that without it there can, as a rule, be no fecundation. There are unquestionably distinct departures from normal ejaculation; it may occur too soon or too late; it

may occur very slowly and in drops, instead of in a jet; or it may be absent altogether. Ejaculation may be complete but be painful, or free from pleasurable sensation. Disturbance may also arise from the effect of alcohol or nicotine. But it is a great mistake to believe that these abnormalities necessarily prevent paternity. Moreover, our own belief will be reflected in the treatment of patients. Probably the most frequent abnormality of ejaculation is marked by precipitancy. There is an erection, more or less complete, and sexual desire, but before the act of coitus is completed, and sometimes before intromission of the penis, ejaculation occurs and the penis becomes flaccid. Such patients have a hypersensitive prostatic urethra, with relaxation and perhaps dilatation of the orifices of the ejaculatory ducts. They require local and systemic treatment, a considerable degree of continence, and afterwards the assurance that if they proceed with greater deliberation and less excitement and without previous dallying, coitus will be performed much more satisfactorily. If their semen contains normal living spermatozoa, they can be told with safety that there is no reason on their part why conception cannot occur. If, on the contrary, we believe that perfect coitus is almost essential to fecundation, we shall grapple with the affections in question with much less hopefulness, and the degree of hope and confidence with which we can inspire the patient will be far less. The consequence will be lack of success in treatment.—*Philadelphia Medical & Surgical Reporter.*

"Cactus Grandiflorus as a Substitute for Digitalis."—It seems to us as highly improper to speak of a drug "as a substitute for" another. If our readers will examine the effects produced by cactus and digitalis respectively, it will be readily seen that the one cannot be substituted for the other upon any but theoretical grounds.

Cactus acts especially upon the circular fibres of the heart and arteries, causing irritability, hyperæsthesia, neuralgia, spasm and palpitation. This condition is characterized subjectively by a sensation of constriction, which is especially marked with this drug, by sharp stitch-like pains, by dyspnœa and by palpitation.

Objectively, we may find endocardial murmurs, excessive impulse or irregularity of the heart's action. Cactus resembles digitalis in respect only to its power of producing heart-failure, and this result is due to the secondary effect in the case of both.

Cactus will prove palliative in cases of hypertrophy of the heart, in which the characteristic constriction and dilatation is not predominant, while digitalis is more likely to palliate in cases where dilatation is predominant and the pulse shows feebleness.

Cactus resembles aconite in its effect upon the heart much more than it does digitalis.

Cactus is much more likely to be of service in angina pectoris than is digitalis!

So far as we know, cactus has little influence upon the renal secretion, while digitalis has a profound effect in appropriate cases.

Cactus causes copious expectoration, oppression of breathing on ascending, and all its effects are marked by that feeling of constriction which is so characteristic!

Digitalis seems to act upon all the muscular fibres alike, but the drug is not equal to producing carditis or peri-carditis.

An editorial in the Journal of the American Medical Association for July 28th, 1888,* strikes the key-note regarding the use of this drug.

It reads thus: "When the patient has entered upon the period of hypersystolism characterized by increased arterial tension, then digitalis is injurious. Increased arterial tension Huchard regards as the cause rather than the effect of sclerosis, and in the early period of arterio-sclerosis, digitalis should only be employed with caution.

It should be remembered always that if we wish to strengthen the heart, we must facilitate and lighten its work. * * * * . It is efficacious when the cardiac muscle and the vessels are suffering from asthenia, and when there are œdemas, visceral congestions, dropsies, and the heart beats softly and feebly.

Digitalis relieves dropsy through its action upon a weak heart, thereby furnishing the kidneys with the normal quantity of blood, and thus restoration of functional activity is obtained.

Digitalis induces a sighing respiration—desire to take a deep breath—a sensation as if there was an impediment, or as if the tissues were adherent.

There is little or no expectoration, thus showing a marked contrast with cactus.

We may thus sum up in reference to digitalis:

1. Digitalis is indicated where there is profuse discharges of urine of watery character, and attended with quick pulse, in small doses, even minute.

2. It is indicated in cases where the urine is scanty, heavily loaded with solids, cardiac debility, hepatic torpor and dropsical effusion, in doses as large as will be borne.

Digitalis, so far as we know, has a much wider field of application than cactus.—Dr. A. K. Hills, in the *N. Y. Medical Times.*

*See Hale on "Diseases of the Heart."

THE RATIONAL TREATMENT OF PNEUMONIA.—The medical profession hears with languid interest of reports of new and curative drugs in pneumonia. When, however, an ingenious, logical, and sensible application of known physiological data is made to the therapeutics of this disease a more scrutinizing attention is called for. An article by Dr. Andrew H. Smith, on "Acute Obstructive Diseases of the Lungs" (American Journal of the Medical Sciences), has all the characters just mentioned. Dr. Smith shows that in an obstructive lung disease like pneumonia, it is the right heart that bears the chief burden. The physician ought, therefore, to watch it with even more care than the radial pulse. The pulmonary aortic pulse cannot be felt, but its strength and that of the heart can be gaged by the intensity of the pulmonary aortic valvular sound.

In an obstructive pneumonia the blood is dammed back into the veins, and there is venous congestion, while the arteries are not full enough.

The therapeutists should aim, therefore, to distribute the blood more evenly. This may be done by taking away blood from the veins by venesection. But a safer method is to use such drugs as nitro-glycerin and the other nitrites. Alcohol is also thought to be of great value, not only as a general stimulant and food, but as an arterial depressor. Dr. Smith asserts that too much food, especially liquid food, should not be given to pneumonia patients, as this embarasses digestion and fills up the circulatory system with fluid.

Oxygen gas and artificial respiration are also recommended, to be used even before the patient's condition is critical.

Digitalis should not be used in most cases of pneumonia. This is a dictum supported by good authority and large experience. Yet digitalis continues to be given.

Dr. Smith's contribution to the therapeutics of pneumonia is the best that has been made for years. Yet he makes no allusion to antipyretics or baths. His conclusions are given as follows:

1. In acute pulmonary obstruction, the danger being from exhaustion of the right heart, the pulse at the wrist does not give reliable indications as to the gravity of the condition.

2. This can be appreciated more correctly by studying the pulmonary circulation by the aid of the pulmonary valve-sound.

3. Marked accentuation of the pulmonary valve-sound indicates a fairly vigorous right heart laboring to overcome resistance in the pulmonary circulation.

4. Decrease of a previously existing accentuation, with only moderate dyspnœa, indicates decrease of pulmonary obstruction.

5. Decrease of accentuation, with increase of respiratory distress, indicates that the right heart is becoming exhausted.

6. Relief is to be sought: *a*, by regulating the diet in conformity with the diminished power of digestion and sanguificatian; *b*, by the use of medicines which dilate the arteries and promote transference of blood to them from the veins; *c*, by the inhalation of oxygen gas; *d*, by artificial respiration; *e*, by placing ligatures about the extremities in order to retain the blood in them and prevent its return to the heart.—*N. Y. Medical Record*

LABORATORY RESEARCHES REGARDING EPHEMERAL FEVERS.—The causation of febriculæ has been the subject of some original experiments by Roussy, whose contributions have recently been published in the Archives de Physiologie. His paper is a significant addition to our knowledge of the febrile process in certain minor affections that have hitherto received very little attention at the hands of biologists. He has observed, in the first place, the frequent occurrence of cases of high temperature of short duration, the cause of which has been the ingestion of stale beer, decayed fish, or stagnant water containing vegetable matter, such as hay, leaves, etc. The author holds the opinion that the cause of this kind of pyrexia is not a specific micro-organism, but a soluble chemical substance. Animals were experimented upon by intravenous injections of water containing decaying organic substances, with the result of producing intense fever, the temperature going as high as 107.5° F., with decided symptoms of gastro-intestinal disturbance. A like quantity of the same fluid taken into the stomach produced neither febrile nor digestive derangement.

Roussy paid particular attention to the high fever caused by the yeast of beer. That substance, when rubbed up with distilled water and after twenty-four hours filtration yielded a filtrate which, injected under the skin, was followed by sharp pyrexia lasting from twelve to fifteen hours. That this fever was not due to the mechanical or other effects of the contained germs, was proved by the fact that when a quantity of the yeast cells was collected on a filter and dried at 270° F., and then prepared for subcutaneous injection in distilled water, no pyrexial action was observed. That the fever was caused by the product of the living cell, was shown by cultivating the yeast in bouillon, and then carefully washing the cells at the bottom of the

glass with sterilized water, and allowing them to stand for three days. The injection of this material was followed by the same febrile agitation as that already observed to be due to the stale beer injections. By a somewhat laborious process, Roussy was able to isolate a granular mass of a light yellow color which caused febrile action when injected. This mass deliquesced upon exposure, forming a syrupy substance that adhered tenaciously to the sides of the vessel when dried. In a desiccator the precipitate became white and slightly scaly, and was readily pulverized; placed upon the tongue, it rapidly melted, at first giving a resinous taste, and after that a biting sensation which rose to a sense of strangulation. To this substance the author has given the name of pyretogenin. Small subcutaneous injections of this fever-producer caused in animals a rise of temperature within an hour or half-hour, often as high as 107° F., and accompanied by chills, vomiting, and diarrhœa. The pulse was frequent, hard, and small, and the skin was dry. There was an increase, during the febrile movement, in the amount of urea and carbonic acid eliminated. After six or seven hours the animal was again in a normal condition.—*N. Y. Med. Journal.*

THE TREATMENT OF PRURITUS.—In the Record of October 18th, was published a scientific study of "The Sensation of Itching" from the pen of Dr. Bronson, which points out the reasons why people itch. What will stop the itching is a question which is of equal interest both to the sufferer from pruritus and the physician called upon to relieve it.

Dr. Bronson tells us, among other things, "that scratching relieves itching by directing the excitation into freer channels of sensation sometimes, especially when severe, substituting for the pruritus either painful or voluptuous sensations." It is scarcely ever necessary for the physician to prescribe this means of relief. It has been a household remedy for ages, and the infant has mastered its application before it graduates from the cradle. More frequently we have to order our patients not to scratch, because the relief attending the act is evanescent, and the damage done to the skin in a moment may take weeks or months to repair.

It is needless to say that this injunction can frequently not be enforced by any means short of the straight jacket.

Fortunately there are a few, out of the many recommended, drugs for the relief of pruritus, which have a more or less pronounced and lasting effect.

Menthol is not a new remedy in this sense, but it has of late received considerable attention. Dubreuil and Archambault have studied its effects in a variety of pruriginous affections, and find that with it they can succeed in calming itching of whatever nature it may be, but that it has its greatest effect in those cases where scratching provokes or keeps up the lesion of the skin and the pruritus. This is particularly true of urticaria, certain eczemas, and the pruritus following scabies after the itch mites have been destroyed.

In urticaria a ten per cent. solution in alcohol or almond-oil can be employed, and in the acute and subacute forms is said to be capable of bringing about a speedy cure. For itching eczemas a five to ten per cent. solution in oil may be used, or from two to five per cent. of menthol may be added to oxide of zinc ointment. Upon excoriated surfaces and mucous membranes, care must be exercised not to use too strong applications, as a disagreeable sensation of burning may be determined, and for such parts an oily rather than an alcoholic solution should be chosen. Again, applications should not be made to the whole surface at once, since the sensation of cold which accompanies the anæsthetic action is in some cases extremely disagreeable.

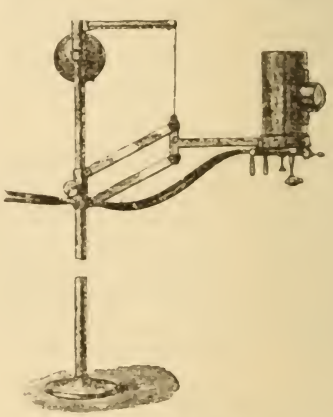
In pruritus ani, perineal and genito-crural eczema, the results of treatment by menthol are said to be very favorable. We must not confound pruritus, as a symptom of numerous cutaneous diseases, with pruritus, an independent disease of nervous origin. In the former the underlying skin affection must be treated in an appropriate way, while antipruritics are relied upon to secure as much relief as possible. And all relief given from the itching is so much gained toward permanent cure. The consolation of the text "Blessed are they who itch, for they may scratch," may have sufficed for olden times, but the scientific spirit of to-day requires of us better things.—*N. Y. Med. Record.*

MEGALOCEPHALIA, OR SWELLED HEAD.—The Maryland Medical Journal discusses editorially the two varieties of this disorder. The congenital variety is so well known that it requires no notice. Concerning the acquired type of the disease, it is said that it affects persons of moderate abilities who have been suddenly, through the influence of friends, raised to positions of eminence and responsibility. It is said that cases are frequently observed among railroad officials or custom house officers, and that they are occasionally met with in the health departments

of our cities and states. The brains of the unhappy subjects of this sad complaint were formed and educated for the performance of quiet, unexciting labor in the small trades, and their possessors did well and respectably in such spheres of life. Being suddenly elevated, through political or similar influences, to posts of great responsibility for which they were in nowise fitted, their brain-cells were unequal to the strain, and various unhealthy forms of thought and action made their appearance. They began to act as if they were bosses, instead of servants, of the public, and as if mere perfunctory performance of their duties rendered them sacred and above criticism. The prognosis in this form is very unfavorable, hopeless in the congenital variety, hopeless in the acquired variety unless the patient quickly returns to his former sphere and stays there. Apart from this, all treatment is useless.

Sexual Life of Women after Castration.—At the Berlin Medical Congress, Dr. F. Deppler, of Venice, read a paper embodying the results of a study he had made in the cases of ovariotomy performed by himself. He had performed castration forty-six times, obtaining a cure in thirty-nine. These operations were performed for the relief of purulent or gonorrhœal salpingitis, oörphoritis, fibroid tumors of the uterus, etc. The following were his conclusions, derived from a study of the physiological consqeuences of these operations: 1. When the operation was performed on account of salpingitis or other inflammatory process, uterine hæmorrhage never occurred subsequently. 2. The conjugata became gradually shortened, and this was the more marked the younger the individual was when operated upon. 3. The uterus became atrophied, the vagina grew shorter and narrower, its mucous membrane became paler, and the labia majora were somewhat thinned. 4. The breasts grew smaller, acquiring a strong resemblance to the pale mammæ. 5. The brown pigmentation of the nipple, areola, perineum, and anus disappeared wholly, as did also pathological pigmentation existing in some of the cases; the hair also turned white. 6. The tendency to embonpoint, which is generally believed to exist after these operations, was not observed by the author. 7. No changes were observed as regards the growth of the hair or the tone of the voice. 8. The sexual desire remained, and was the more pronounced the earlier in life the operation was performed. 9. The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. 10. A marriage with a castrated woman is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman. 11. In the cases operated upon in early life for inflammatory conditions, no neuroses were seen to develop, which was not the case when women were operated upon late in life for fibroid tumors of the uterus. 12. A favorable influence upon the hæmorrhage was observed after operation for myoma, yet in no case did the menopause at once set in. 13. In cases of operation for uterine fibroma, the patients, even those in full maturity, lost all sexual inclination after the operation.—*Medical Press & Circular.*

New Lamp for Laryngoscopic Examinations.—For the satisfactory carrying out of laryngoscopic and rhinoscopic examinations. I have recently had a limelight apparatus fitted up in my consulting room, which for convenience and simplicity of construction is, I believe, unequalled. It consists of an up-



right standard, which is fixed in the floor below and to the wall above. Sliding on this and adjustable at any height is the bracket for the lamp. Lateral movement is obtained by the rotation of the standard on its pedestal. The upward and downward movement of the lamp is effected by means of a counterpoise contained in the hollow tube constituting the standard. The balance is so true that the lamp can be readily moved with one hand and remains in any position without having to be fixed. Flexible tubes connected with the cylinder containing the oxygen and with a gaspipe convey oxygen and gas to the lamp. The metal tube for the oxygen is in the center of the gas jet, and the flame is directed against a cylinder of lime. The chimney of the lamp is provided with a bull's-eye lens to concentrate the light.—F. de Havilland, in *London Lancet*, Nov. 15, 1890.

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Original Articles.

SURGICAL TREATMENT OF SARCOMATA OF UTERUS.*

BY DOCTOR TERRILLON.†

Pathological Anatomy.—The uterine sarcoma is developed by two different processes. At times, from the very outset, and almost exclusively, it invades the mucous membrane, exercising only the influence of contiguity on the muscle itself, which is only hypertrophied. At other times, on the contrary, the lesion originates in the uterine muscle, and produces at its cost one or more tumors. As to the mucous membrane, it may be augmented in thickness—the vascularization may be exaggerated; it will thus contribute to the total hypertrophy of the organ, and especially to the enlargement of the cavity, but later on usually participates in a sarcomatous transformation.

There are, it may be said, two distinct forms from the point of view of pathological anatomy, as well as from the clinical: The sarcoma of the mucous membrane, and: The interstitial sarcoma—which is the true tumor of the body of the uterus.

It is clear that in some cases the two varieties may be found more or less combined; yet they remain not less distinctly and individually defined. Admitted by all authorities, this distinction will recur constantly in the following study:

Sarcoma of the Uterine Membrane.—I may describe two very different and distinctly characterized types of the mucous membrane. In one, a very common form, the membrane is hypertrophied—thickened by the sarcoma—infiltrated, presenting on the side of the uterine cavity a characteristic protuberance. This aspect was especially remarkable in a case presented by me in 1886, to the Society of Surgery; the mucous membrane in that instance was, so to speak, transformed into a large number of papillæ, scarcely pediculated, and very vascular. One of these papillæ was seated at the level of the internal orifice of the cervix, which it almost completely obstructed, and the blood supplied by the membrane had so accumulated in the distended uterine cavity as to constitute a veritable hæmatometritis. Recently I observed another example of this form. The mammillated appearance was only less generalized, and was localized at the base of the uterus.

Beside the lesion of the mucous membrane, there always exists in this first form of sarcoma, a total hypertrophy of the uterus, and a thickening of the muscular walls; finally, the cavity enlarges until it acquires, as I have observed, a depth of twenty to twenty-five centimetres. As for the cervix, it seems to escape, almost uniformly, the invasion of the neoplasm. It is said that this independence of the sarcomata of the body and cervix of the uterus, is a characteristic observed a long time ago.

The second form which my observations permit me to describe, is the ulcerous. Here the mucous membrane, infiltrated and thickened, does not proliferate and vegetate; it seems, on the contrary, to suffer from incomplete nutrition, and to undergo distinctive modifications; indeed, we see its elements detach, leaving a surface, anfractuous, ulcerous, and yellowish, whence exudes a large quantity of serous liquid, hardly sanguineous. This liquid contains often a considerable proportion of epithelial débris, and has the puriform aspect characteristic of abundant hydrorrhœa, by which the patients are constantly besmirched.

With one of my patients, from whom I removed the uterus, making the section at the base of the cervix above the vagina, this form of the lesion was singularly distinct.

*Translated expressly for MEDICAL AGE, by Mr. Jos. Helfman, Detroit Mich.

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The organ was greatly hypertrophied, and its walls considerably thickened. The enlargement of the cavity was particularly remarkable, for it measured more than twenty-two centimetres. These exaggerated dimensions appeared to me a serious argument in favor of the diagnosis, which was finally confirmed by histological examination of a piece of the mucous membrane removed during curetting. Thus were explained the various symptoms which presented themselves in this patient before the operation, notably the abundant flow of a serous and yellowish liquid which had been exhausting her strength for several months. This flow was often combined with profuse hæmorrhage, due to the rupture of vessels at the ulcerated parts.

I have treated two patients, one aged 48, the other 53 years, who were both suffering from ulcerated sarcoma of the uterine mucous membrane. In these two women I found a voluminous organ with exaggerated cavity; the principal symptom was the profuse hæmorrhages, often almost constant, accompanied by very abundant hydrorrhœa. This complex flow had begun, in both cases, four or five years after the menopause.

An energetic curetting, by furnishing the elements for microscopic examination, permitted the establishment of a precise diagnosis. However, this procedure, followed by cauterization with the aid of chloride of zinc, and repeated a second time in one of the cases three years later, caused the almost complete disappearance of the hæmorrhages; the serous flow alone persisted. However, these patients, greatly debilitated and bedridden for a long time, became stronger, and are in a better condition than before the intervention.

Interstitial Sarcoma: I shall describe also two forms, quite distinctly defined, of interstitial or sub-peritoneal sarcoma.

The first is characterized by a considerable hypertrophy of the entire uterus. It seems that the malignant growth invades almost concurrently the entire thickness of the muscle, which becomes hypertrophied *en masse* in such manner as to acquire enormous volume. In one of my observations, the organ thus altered weighed 19 kilogrammes.

An augmentation in the diameter of the uterine cavity accompanies this hypertrophy; it but slightly exceeds twelve or fifteen centimetres. The numerous vessels which issue from the large ligaments, and which ramify to the surface of this large tumor, are notably exaggerated. I have remarked that the veins were always more voluminous than in simple fibroma of the same volume.

It is not rare to find muscular fibre in some part of these interstitial sarcomata, which justifies the opinion of several authors, that these tumors are often fibroma transformed into sarcomatous tissue.

The first case of this kind which I observed, presented the following peculiarity: The sarcoma developed in such a manner as to extend throughout the entire thickness of the wall of the uterine body; it presented but very few protuberances projecting from the side of the peritoneum. This sarcoma was removed by laparotomy, with section of the uterus above the culs-de-sac of the vagina. The pedicle, tied with a rubber tube, was abandoned in the abdomen. The tumor weighed 13 kilogrammes. The cavity was enlarged, and measured 12 centimetres. There was much blood, although the mucous membrane was but slightly modified. The entire muscular wall was infiltrated with sarcomata.

This patient, who had been sent me by my friend Dr. du Castel, recovered rapidly from the operation, and was even able to resume her trade as seamstress; but she died six months afterwards from pulmonary accidents, which seemed to have been caused by one of those relapses or propagations which occur through the venous system, the possibility and frequent existence of which Virchow long ago demonstrated.

In April 1890, I operated at the Salpêtrière for a second diffuse sarcoma of considerable volume. The tumor, which weighed seventeen kilogrammes, was presented to the Anatomical Society by M. Chibret, Interne de Service. It had developed in the space of fifteen to eighteen months, and communicated with the uterus, whose cavity had become enormous—of such dimensions that the abdomen was 1.65 metres in circumference. Originating in the body of the uterus, the neoplasm had partially infiltrated the large ligament. It adhered to the bladder, from

which we could not separate it, to two loops of the small intestines measuring fifty centimetres each, and finally to the aponeurosis of the iliac muscle of the right side.

The ablation was very tedious, but complete. The small uterine pedicle was cut above the vagina. Unhappily, the patient died from the shock of the operation at the end of thirty-six hours. It was a case of sarcoma with small cellules, soft, very vascular, and resembling in its false fluctuation an ovarian cyst.

I have recently examined a third instance of voluminous sarcoma, which also merits special mention. It was that of a patient aged fifty-three years, very vigorous, having had two children, and operated on in 1873 by Prof. Trélat for a small tumor of the left breast, which this Surgeon then considered to be a sarcoma. The cure was complete, and nothing appeared on that side. In 1887, fourteen years after this operation, Madame X. perceived her abdomen was enlarging. For some time before she had experienced uterine discharges, and the existence of a fibroma had been suggested. But the evolution of the malady was so rapid that soon the circumference of the abdomen attained 1.60 metres.

When this lady, in July 1890, came to Paris, accompanied by her physician, Dr. Vast, I too believed in the presence of a fibroma of rapid growth, and, considering the life of the patient was menaced, proposed radical intervention. The operation took place on the 24th of July 1888. I easily removed an enormous uterine tumor, weighing twenty kilogrammes, and left in the abdomen the lower part of the cervix, tied by the aid of a rubber tube. Recovery was perfect, without accident, and after twenty-five days the patient left Paris.

Examination of this large tumor showed that it was in reality a fibro-sarcoma, certain parts presenting muscular fibres, almost without mixture; other parts more mixed; others constituting a soft sarcoma or fasiculæ almost pure. Five months after this operation, the patient presented several accidents in the side of the vagina, with purulent flow and moderate fever in the evening: I at once thought of a possible relapse, but soon discovered the cause of these phenomena. The rubber tube soon presented itself at the base of the vagina. It was readily withdrawn, when all accidents ceased. The patient then, in December 1888, resumed her occupations and habitual life, with all the appearance of most flourishing health.

But toward the month of May 1890, that is to say, less than two years after the radical intervention, vesical and rectal compression made their appearance, with painful crises in the lower abdomen. When I saw her, in August 1890, she was manifestly suffering from a renewed attack, characterized by a tumor which almost completely filled the pelvis, without intrenching in a sensible manner upon the vagina. She died in October.

Finally, I had opportunity to observe, in June 1890, in a girl aged twenty-eight years, one of these voluminous interstitial sarcomata. When I examined this patient, the first of June, the abdomen was enormous, the superficial veins dilated. I could diagnose the presence of a gigantic tumor, hard, resistant, and mingling with the uterus, (which had been borne up high in the pelvis,) under the cervix, which it was difficult to reach by vaginal touch. The rapidity of the development caused me to think of a sarcoma. Despite the very bad condition of the patient, and in accordance with the counsel of Prof. Tarnier, I attempted an operation, which was the sole chance of relief and of prolonging life.

This operation took place on the first of August 1890. It was very tedious. As with the preceding patient, the uterus, transformed into an immense interstitial sarcoma weighing fifteen kilogrammes, had pushed between the two layers of tissue of the large ligament, joining with intestinal loops, to which it adhered. I was, however, able to separate it from these organs, as also from the bladder, without wounding them. The layers of tissue of the large ligament which surrounded the base of the tumor, I cut, and bound by means of eighteen wire ligatures. The uterine pedicle, which was of small dimensions, was finally abandoned in the abdomen. This patient recovered from the operation, but remained languishing, and, I learn, is now (November, 1890) suffering from relapse.

The second form of interstitial sarcoma

is quite common. Its characteristic is the production of sarcoma in places usually quite circumscribed. At its beginning, the tumor occupies the surface or interior of the uterine muscle, constituting a nucleus which scarcely projects under the peritoneum. Developing, it invades the serous membrane, more and more repulsing the latter until it is finally pediculated. Later, it enlarges in its projecting part, assuming the form of a glossy mushroom almost without protuberances, floating, so to speak, in the abdominal cavity, and retaining its connection with the body of the uterus by a pedicle of variable volume. At the surface of the uterus, two or three growths, indicating different stages of volume and of pediculation, may be found. The organ affected with this kind of a tumor, is always hypertrophied. The pedicle has a variable volume. I have seen it vary between five and ten centimetres in diameter.

It is well to insist henceforth on the fact that, despite this pediculated form, the sarcomatous tissue always penetrates into the uterine wall; as a result, the partial operation which may be made on every tumor, without touching the substance of the organ, is almost always useless.

I have thrice had occasion to remove subperitoneal pediculated sarcomata from the base of the uterus, that were free in the abdomen and without adhesions. However, in the third case, the tumor which occupied the entire true pelvis, had been producing, for fifteen days, phenomena of compression, with retention of urine and very serious signs of strangulation. At the time of operation, I experienced the greatest difficulty in withdrawing from the pelvis this mass, thus enclosed, and I did not succeed in so doing until at the end of twenty minutes, after having displaced it in every way and caused it to turn on all its diameters.

I finally made, on the body of the uterus, a little above the vaginal *cul-de-sac*, a pedicle which seemed to me too large to be reintroduced into the abdomen, and which I fixed to the wall, after having ligated with a rubber band, with a pin.

After this painful operation, in which I was assisted by M. Siredey, and Dr. Thiéry (Rouen), I was the witness of a curious accident :

For two days all went well; the temperature did not reach 104.4 degrees; the intestines and the bladder performed their functions normally. But on the morning of the third day, I perceived abundant hæmorrhage from from the pedicle had occurred during the night. The latter had been half cut through by the rubber, and carried back to quite a depth. Energetic tamponing, after cleaning out the clots, arrested the flow of blood, but a rapid septicemia ensued, and the patient died five days later. The examination of the uterus gave an explanation of this accident: It proved to be a case of sarcoma with little cellules and rapid development. Now, at the moment of making the pedicle, I believed I was operating upon sound tissue, when in reality in the very midst of soft friable sarcomatous substance, which was not able to resist the constriction of the rubber, and thus had been cut, occasioning hæmorrhage and promptly fatal septic accidents.

Cystic Sarcoma: A third variety of sarcoma remains to be described: The cystic. It is formed in the mass of the tumor, whether it be a true cyst, or in places a partial softening giving the appearance of cysts. The latter are rare and distributed in the sarcoma in a variable manner. Generally, in the cavities, which at times acquire a considerable volume, a sanguineous liquid is found, or rather, a blackish pap, distinctly fluctuating, and in which shreds of sarcomatous tissue often float.

I observed a very curious example of the first variety in the course of an exploratory incision. It was the case of a woman fifty-six years old, who had begun in 1888 to suffer pains in the abdomen and abundant discharges. Prof. Damaschino, in consultation, found only a scarcely appreciable uterine lesion. He regarded it as an incipient fibroma. But the malady progressed rapidly, and soon a tumor appeared distinctly above the umbilicus; in May 1890, it had ascended as far as the xyphoid cartilage; the general condition was now mediocre, and anæmia extreme. When I made the examination, I found a tumor with protuberances, solid at some points, liquid at others, and joined with the uterus, which was pressed forward and impeded urination. I made a

diagnosis of uterine sarcoma with extended cysts. Yielding to the wishes of the patient and the physician who accompanied her, Dr. Mavrikos, I consented to operate.

On opening the abdomen, I found an enormous mass, the surface of which was traversed by dilated veins. Puncture, twice repeated, yielded five litres of black liquid which might be taken for blood altered by long sojourn in the cystic pouches; the rest of the tumor was solid. By examining this tumor with much care, I soon observed it had partly developed in the large ligament; also it had pressed forward three loops of the small intestine, to which it adhered, as well as to the omentum; and that the surface of the parietal and visceral peritoneum were strewn with granulations. After having detached and bound a part of the omentum, I recognized it was impossible to separate the tumor from the pelvis and the intestinal loops. I therefore took a fragment of the neoplasm for histological examination, and closed the abdomen by the aid of a dozen sutures.

The results of the operation were favorable. The patient's nutrition improved from that moment, and in July (less than two months after the exploratory incision) she was able to return home. Microscopical examination showed that it was a case of sarcoma with small cellules.

I recently encountered (August, 1890) a second example of this same anatomical form of sarcoma. It was that of a lady fifty-two years old, wife of a physician, who for twelve years had a fibrous tumor occupying the base of the uterus, giving rise to slight troubles. However, the malady, which had long rested stationary, had proceeded with great rapidity during the last eighteen months. Little by little the tumor had invaded the abdomen, which it soon filled, and which attained a circumference of 1.50 metres; at the same time, examination revealed in this vast mass, developing rapidly, some parts distinctly fluctuating. Life was evidently threatened, and it was decided to operate. The diagnosis seemed to me to admit of little doubt; owing to the rapid development, which, moreover, is not very rare in this variety, it was evidently a case of sarcoma with voluminous cyst. The operation took place on the 10th of August, 1890. I proceeded to attempt ablation of the uterus by laparotomy, performing the section above the vagina.

Upon opening the abdomen, I observed the walls of the fluctuating cavity presented a thickening and exaggerated vascularity; the idea of a sarcoma was accordingly justified. I made a puncture with a large trocar, and was able to extract about five litres of a reddish liquid. The tumor being thus diminished in volume, I proceeded to remove it; but I at once recognized considerable epiploic adherences and sarcomatous nuclei in the omentum; moreover, two intestinal loops were intimately united with the tumor. Despite these difficulties, I was able, though not without trouble, to cut the uterus above the vaginal culs-de-sac, forming a voluminous pedicle which was fixed in the lower angle of the abdominal opening. The solid part of the tumor removed, weighed about twelve kilogrammes. It was composed of sarcomatous tissue, mingled with fibromatous nuclei, readily recognizable in the mass. At several points, especially towards the surface, we could distinguish cysts, or rather foci, of sanguineous discharges.

In the month of October, 1890, I removed from a woman forty-six years of age, a tumor almost similar to the preceding one, though less voluminous, which had formed upon the base of the uterus. In this tumor there existed three large cavities, containing each one to three litres of almost pure blood.

Symptoms.—The preceding descriptions have made evident how varied are the anatomical aspects under which sarcomata of the uterus may present themselves. Their volume, their consistency, their form, the existence of cysts in their interior, are so many variable elements. I have, however, been able to make several interesting observations on the subject of their development, of their symptoms, and especially of the indications of surgical intervention. The age of the patients merits attention first; it varies from thirty to fifty years approximately. We cannot refrain from comparing this development, supervening at the middle of life, with the appearance of sarcomata of the ovary in youth—from fifteen to twenty-five years of age. A second interesting characteristic of

these sarcomata, and especially of sarcomata of the body of the uterus, is their greater frequency in women who have had no children. Hence, out of fourteen observations, only two of the patients had a child during youth. This relationship between the inactivity of the uterus and the development of the sarcomata, has already been mentioned by most authors, hence I shall not attempt to give its explanation.

A very important matter, especially from a diagnostic point of view, concerns the rapid development of these tumors. When the surgeon observes evolution in a few months, of a neoplasm growing upon the uterus, whatever may be its extent or its connections, sarcoma must be suspected.

Most absolute integrity of the general condition, is one of the most remarkable clinical characteristics of this malady. At the beginning, the *embonpoint* is scarcely diminished, nor has the general appearance suffered. The sarcoma often attains considerable volume without making itself manifest through any perturbation of health. Eight of my patients were examples of this in all respects, before the appearance of the tardy phenomena of compression which they suffered.

The following case is a remarkable instance of rapid evolution of the lesion, coincident with the most perfect conservation of health:

A woman forty-five years of age, never having had a child, and enjoying blooming health, experienced in March, 1889, without paying special attention thereto, pains in the lower abdomen, and some difficulty in urination. When away from her home, she consulted, at Pau, a physician who informed her of the presence of a small tumor adhering to the uterus. She soon returned to Paris (March 10th), and came to consult me. After examination, I concluded — but without more precise diagnosis—it was a case of hard, small tumor, seated at the base of the uterus. Three weeks later, further examination:—The abdominal pains, especially the difficulty of urination and defæcation, had become rapidly pronounced. This time it was possible to determine the presence of the same tumor, which now filled the pelvis. Very soon there arose grave symptoms of intestinal obstruction, and on the 17th of April I operated to guard against acute accidents of compression. I removed two pediculated tumors, weighing three and four kilogrammes, and composed exclusively of sarcomatous tissue with fine cellules, but without cysts.

An almost analogous instance presented itself to me during the year 1888. I was called into one of the provinces by Dr. Gey, to attend a woman thirty-two years old, married, without children, who presented all the symptoms of a tumor at the base of the uterus. This young woman, still enjoying good health, complained particularly of violent abdominal pains (of phenomena of compression,) which had made their first appearance several months before. Her physician had been struck by the rapid development of the lesion, and according to his statement, it had proceeded so rapidly that in a few weeks the tumor had trebled its volume.

After examination, I diagnosed pediculated sarcoma at the base of the uterus, projecting into the pelvis, and proposed operation, which took place on the 4th of August, 1889, when I removed a pediculated sarcoma weighing three kilogrammes. The pedicle originated at the base of the uterus, and was as large as my wrist. This pedicle was bound with a rubber tube, superficially cauterized, and abandoned in the abdomen.

The transformation of fibroma into sarcoma has been the subject of much discussion, especially in Germany. Doubtless the frequency of this occurrence has been exaggerated, and many tumors, yet small, have in certain cases been mistaken for fibroma, when they were really incipient sarcoma. However, in two voluminous sarcomata, of seventeen and twenty kilogrammes respectively, which I examined, I found distinctly fibromatous parts mingled with sarcomatous nuclei. We may, accordingly, assume that the transformation is possible, or that the two varieties may develop simultaneously.

Course.—I have noted with what rapidity these uterine sarcomata evolve, especially those which originate at the base of the uterus; hence, it is not to be wondered at that the patients rarely live more than two years, counting from the first appearance of the lesion. In my observations, this period of survival has been rarely exceeded.

The grave disorders which produce death, seem to depend particularly upon the phenomena of compression from the side of the

pelvis or the abdomen; as, for example, when the tumor, coalescing with the large ligament, comes in sufficiently direct contact with the intestines.

After ablation, relapse is the rule; it supervenes after six or eight months. In one of my observations, two years elapsed before it occurred. If the affected organ is not totally removed, the new neoplastic evolution will take place in the stump. At other times it will occur in the adjacent parts.—With one of my patients the lung was attacked. Sarcoma, however, does not attack the ganglia.

This question of relapse is admitted by all surgeons who have operated upon similar tumors. If several examples of sarcoma of the uterus without rapid relapse are cited, they are really rare forms of hard sarcoma, fasciculated, and developing slowly.

Diagnosis.—Diagnosis of sarcoma of the mucous membrane is very delicate. However, one may here take cognizance of several symptoms sufficiently important to permit, when combined, the attainment of real precision. There is an abundant sanguineous flow, almost constant, a considerable augmentation in the volume of the uterus, and a notable enlargement of its cavity,—symptoms which, grouped together, will indicate almost positively the nature of the lesion; and if observed in a woman who, several years before has passed the menopause, they acquire still more value.

In this manner, I have been able to make a very precise diagnosis in a woman fifty-two years old, portly and enjoying good health, who had been referred to me by Dr. Lecoin. After having determined an almost permanent flow of very black blood issuing by the cervix, I measured the uterine cavity and found a distension of fifteen centimetres; the uterus was as large as two fists. I then confirmed the presence of a sarcoma. Nevertheless, I did not feel it incumbent upon me to propose operation, the volume of the uterus being too considerable to permit extraction per vagina; but my exploratory interference contributed to the rapid decay of her flourishing health, and to the aggravation of the symptoms which I had observed. At the end of five months the patient died of cachexia, with symptoms of grave compression on the side of the intestine.

Diagnosis of incipient interstitial sarcoma is often very difficult. The presence of protuberances, of tumors projecting upon the surface of the body of the uterus, will certainly suggest this affection, but the analogy which it presents with fibroma is such a single characteristic will permit the surgeon to affirm the presence of sarcoma, viz.: The rapid course of the malady. This manifestation will be not less precious in cases of enormous sarcomata, whose evolution is much more prompt than that of fibroma of the same volume.

Surgical Treatment.—In a general manner it may be said, that the sole rational treatment is total and absolute ablation of the organ suffering from the disease. This alone is sure of guarding against almost certain local relapse, or remote propagation through the venous system, if the latter is not already invaded at the moment of operation. But aside from this indication, the mode of intervention must vary with each separate form of the malady. I propose to review each of the varieties of sarcoma, with the operative results which I have obtained.

Total ablation distinctly indicated, unfortunately may not always be performed under favorable conditions; it often becomes impossible as a result of certain anatomical factors.

The removal of the organ per vagina is applicable only to intra-uterine sarcoma still in its incipiency. In fact, the body of the uterus soon augments in volume, and becomes so large that its passage through the natural channel is almost impossible. I have been obliged, in one case, to reduce the organ to fragments in order to be able to effect its passage through the vagina, and only with the greatest difficulty was I able to remove it.

It must be stated, however, that removal through the vagina is indicated in all cases where the uterus is still small and mobile—conditions which are, in truth, rare, for the patients are always tardy in applying to the surgeon, a slight discharge of blood, or of serous matter, without further inconvenience, failing for a long time to arouse their suspicions of the gravity of the disease. Be that as it may, this remains a fairly limited and rare resource

in the hands of the surgeon. Intervention through the abdominal passage is, on the contrary, of a general application, and is convenient not only with pediculated sarcomata, and gigantic and cystous sarcomata, but also with uterine sarcomata.

In respect to the latter, which attack the cervix as rarely as the interstitial form, properly so called, I do not see why, if the vaginal passage be impracticable, we should not apply to these tumors, as to fibroma, supra-vaginal hysterectomy. I have thus thrice removed, by laparotomy, sarcomata of the mucous membrane with considerable hypertrophy of the uterus. The pedicle, held by a rubber tube, was abandoned in the abdomen.

The first of these patients was operated on in 1885, for vegetating sarcoma with accumulation of blood in the uterine cavity. This patient recovered well; thirteen months afterward she died from relapse in the side of the pelvis. The second was operated on at the Salpêtrière, the 1st of April, 1887, for sarcoma of the mucous membrane, also yielding a large quantity of blood with considerable hypertrophy of the uterus. Cure was accomplished, but the relapse, more rapid in this case, carried off the patient at the end of five months. The third patient has already been referred to, and also recovered from the results of intervention, but succumbed, eight months afterwards, to relapse attacking the lung.

The same procedure might be applied to gigantic sarcomata, with a facility—at least such has been my experience—which will be greater accordingly as the cervix is less voluminous, that is to say, as the pedicle left in the abdomen is smaller. But here the operation is of more gravity on account of the frequent adhesions to the intestine or the neighboring organs.

The pediculated sarcomata are evidently amenable to a similar operation. However, tempted by conditions favorable, and especially by the natural existence of the pedicle, I have thrice contented myself with removing only the tumor without touching the body of the uterus. In one of these cases the operation was a complete success; unhappily the patient died two months later from repullulation at the level of the pedicle; but on the other occasions I had cause to repent having renounced, at the wish of the attending physician, a simpler mode of intervention.

I have already alluded to the first of these failures. It was the operation in which the sarcomatous pedicle was cut by the rubber band which held it outside. Grave hæmorrhages, followed by septicæmic accidents, ensued. In the second case the pedicle had been returned, but there was acute septicæmia. Was it perhaps one of those auto-infections, from microbes contained in the sarcomatous tissue, which Martin and his pupils have so thoroughly studied?

In the presence of such obstacles, I shall not hesitate henceforth, in treating pediculated sarcomata, or the others, to remove the uterus in totality above the vagina. As to the extirpation of the uterus with the cervix, this would be an ideal mode of intervention, but its immediate results are so bad that its indications are to be restricted.

I will terminate my remarks concerning surgical treatment, by recalling the fact that intra-uterine sarcomata, bleeding and discharging an abundant flow, may be locally treated by dilatation, curetting, and cauterization with chloride of zinc and perchloride of iron. I have used these agents on several occasions, and the benefit has always been considerable. The hæmorrhages, particularly, have been arrested quite rapidly and for a considerable time; the hydrorrhœic discharge, although attenuated, alone persisted. This treatment may be applied several times at varying intervals, when the radical operation is inopportune or refused by the patient.

I have thrice observed, after resorting to this mode of operation, a sudden elevation of temperature, reaching 104 degrees, occurring on the same evening and persisting for one or two days. Curetting and cauterization had, however, been performed with the ordinary antiseptic precautions. Moreover, a similar phenomena has never been observed after curetting for metritis, however severe. I attribute this hyperthermia to auto-infection from fluids contained in the uterine cavity or in the sarcomatous tissue itself.

I have alluded to similar facts *à propos* of an acute septicæmia caused by a sarcomatous pedicle. This question of the septic fluids

contained in certain tumors remains to be studied, and is of great interest, though we have, to be sure, been long aware that the slightest operation on certain malignant neoplasms may be followed by grave accidents, despite all antiseptic precautions.

Several modern works on this subject have enlightened us on the ætiology of certain septicæmias, whose origin could not be imputed to operative error, but probably due to an infection proceeding from the neoplastic tissue.

PARIS, FRANCE.

EVILS OF DELAY AND PROLONGED TREATMENT IN PELVIC TROUBLES.

BY W. H. LINK, M.D.

Medical treatment of fibroid tumors may be either active or expectant. If active, in any but submucous tumors, harm rather than good may be expected. Medical treatment, so far as the growth itself is concerned, is really no more than expectant treatment, for to believe that any drug has the power to dissolve a ten or thirty pounds' growth, and cause its absorption, is to believe what neither experience or common sense justifies.

Of ergot, it can only be hoped that the blood supply will be diminished, and thus the nutrition of the tumor being taken away or greatly lessened, it will cease to grow. But frequently, if the nutrition is reduced, (even if the vital resistance of the growth is lowered without entirely destroying vital tenacity) a tissue that, in its most active stage, is highly and delicately sensitive to traumatisms, now readily breaks down, and the patient suffers from the effects of sloughing, and is doubly endangered by the greatly increased susceptibility to such an accident by reason of the artificial vulnerability of the neoplasm thus produced. If ergot does not in any given case thus make matters worse, it fails to produce any visible effect. The treatment being thus no more than expectant, the growth continues to increase, and the patient's condition becomes worse day by day.

If the treatment is electrical, we have an element that not only does no good, but is fertile in results that, if they do not destroy the patient's health, give rise to the gravest complications; complications, too, which render subsequent operative interference doubly difficult and dangerous. The influence of strong currents may easily destroy the feeble vitality of badly nourished parts of the fibroid, and the disintegrating debris or necrotic material thus produced, is swept into the general circulation by the lymphatics and smaller blood vessels, pyæmia, following; or an operation on a moribund woman must be performed, in the forlorn hope of snatching from the jaws of death one who might, at a much earlier period, have furnished a brilliant example of what can be accomplished by conservative surgery. If the amount of broken-down tissue be not sufficient, or its virulency be not effective enough to produce these results, a peritonitis, either local or general, may follow, with multiple adhesions binding together bowel, omentum, tubes, ovaries, and uterus, so firmly that to identify, enucleate, and separate, in any subsequent surgical procedure, is a matter of the greatest difficulty.

These principles were forcibly and clearly illustrated in the last two supra-vaginal hysterectomies made by Dr. Joseph Price, of Philadelphia. The first was upon a lady thirty years of age,confined to her room for three years with a growing uterine fibroid involving the entire uterus. She had for a long time been fairly comfortable, with no perceptible growth of the tumor, till in an evil hour persuaded to try electricity. Under the influence of this agent, a rapid growth, accompanied by repeated attacks of peritonitis, took place, till the tumor became so great that it filled the entire pelvis; and after she had withstood sixteen electro-punctures, her condition was so deplorable that, as a last resort, Dr. Price was asked to remove, by surgical means, what had been so rebellious to the "soothing and softening influence of electricity."

Upon opening the abdomen, the entire pelvis was found to be filled with a round hard tumor, which had neither semblance or shape of the uterus. There were universal adhesions, radiating from the different points of puncture like huge spider webs, binding firmly together peritoneum, pelvic walls, and abdominal viscera. Enucle-

ation was effected with very great difficulty, and the location and formation of a pedicle presented a well-nigh impossible problem. In order to secure the latter, the capsule had to be stripped almost from the top of the growth, and was so large as to nearly fill the entire incision. Had she not suffered from the baneful effects of procrastination and false and harmful therapy, she might have been relieved at a very much earlier date, by a simple operation for removal of the appendages.

The second case was one that had been treated for the last six years on the soothing and expectant plan. Her physician had been wise enough not to harm where he could not benefit, and refused to apply electricity. When the growth was exposed by the usual incision, although it was so large that it rose up out of the pelvis, and had swelled up both tubes and ovaries in its growth, there was not a single adhesion, and it was turned out of the abdomen as easily as a pregnant uterus in a Porro case. It was removed, and the patient dressed and put to bed in 45 minutes. Both these cases are now out of danger, but the convalescence of the first has been much slower and less hopeful than that of the second, which has not had an untoward symptom.

These two cases finish a series of thirty-five successive supra-vaginal hysterectomies without a death. In all the pedicle was treated extra-peritoneally. In every case where electricity had been used there was a history of repeated attacks of peritonitis and septicæmia, and all such were complicated with multiple adhesions, rendering the surgery more dangerous, both on account of the time devoted to enucleation, and the unavoidable damage to delicate structures.

A third case was for double tubal and ovarian disease. This patient had been a chronic invalid for nine years, and under constant medical surveillance during all this long period. She had suffered from repeated attacks of peritonitis due to tubal leakage, and been invariably "cured" with the usual and much vaunted opium, just as soon as conservative adhesions had shut off the *materies morbi* from the peritoneal cavity. Her condition, at last, became so grave that friends sought surgical relief for her as a life-saving measure. There was universal adhesion due to the successive attacks of peritonitis. Fundus, bladder, tubes, ovaries, bowel, and omentum, were all matted together, till enucleation became well nigh impossible. There was double hydrosalpinx, with a large blood cyst, on the right, and a cystic ovary on the left.

Here was a woman who had virtually lost nine years of useful life, who, during all this time had been a burden and expense to her friends, and a constant source of anxiety and suffering to herself. The hope deferred, the repeated mockery of the so-called cures, the bitter disappointment as drug after drug was tried and found only to lull at most, can better be imagined than described. Had the proper diagnosis been made, and the needed surgical treatment sought, nine years of usefulness would have been hers, instead of a prolonged period of apparently hopeless suffering, liable at any time to terminate fatally by some accident fanning into flame the slumbering embers of peritonitis.

PETERSBURGH, IND.

"TAKING COLD."*

No small proportion of the physician's practice is made up of treating the minor maladies of his patients, and success in these often establishes the popularity of a practitioner.

Affections of the respiratory tract in the variable climate to which most Americans are subjected, are always endemic, and often baffle the skill of the most expert.

It seems somewhat strange that a class of diseases always prevalent should not have been combated with more success. Even the standard text books are somewhat vague and indefinite in the views expressed as to their relief.

Some thoughts from a recent author who has given special attention to the investigation of this subject, may not be unprofitable. In the first place, it is pertinent to inquire: How do we take cold?

In the minds of most people the word

* From advance sheets of "Taking Cold," by F. H. Bosworth, M. D. Physician's Leisure Library, 1891. Geo. S. Davis, Publisher.

"cold" is naturally associated with low temperature, and they confuse the idea of taking cold with that of absolute cold, regarding the penalty which they suffer as the result of an exposure as due somehow to a direct loss of heat from the body.

Now, this is an entirely erroneous idea. The body is constantly losing heat, radiating it in large quantities sometimes, without in any way suffering therefrom; in fact, the radiation of heat from the body, is a constant process and a conservative one. Furthermore, when the demand for heat is very great, as when the thermometer ranges below the freezing-point, the supply is fully equal to the demand. A swimmer will plunge into the water at a temperature of 25° to 30° below that of his body, and remain immersed for hours even, without suffering, and yet the loss of heat by radiation must necessarily be very great. This loss is thoroughly made up by the rapid heat-production which is going on in the system as the result, in part, of the vigorous exercise which he is compelled to keep up during his immersion. Again, in the Turkish bath, after spending some time in a hot room at a temperature of from 160° to 190°, one plunges directly into a cold bath, not only with impunity but with a sense of refreshment and invigoration. We have here, then, instances wherein the absolute loss of heat from the body is very great indeed, and yet the process is attended with no danger to the general system, in the way of taking cold or other penalty. We must, therefore, look further for some rational explanation of the method by which, and the reason why, we take cold.

Animal heat is generated in all portions of the body, but like all other processes which go on in the human organism, this process of heat-production is governed by the central nervous system, and any disturbance of heat-production in one portion of the body leads to a disarrangement, as it were, of the whole system.

Let us liken, if we may, this central nervous system which governs the whole matter of warming the body, to a chandelier, say, with five gas-jets. If they are all lighted and burning with a steady flame, this constitutes health. Now, if we turn out a portion of them, two or three perhaps, we find that the others flare up with an increased intensity, which we may liken to a diseased condition here. If one of the burners is somewhat weakened, it flames up above the globe of the chandelier in an abnormal jet; this we may liken to the inflammation which is caused by our taking cold.

If the central nervous organization, which governs heat-production and nutrition, is disturbed or upset in having this process of nutrition shut off, or arrested, in one portion of the body, the back of the neck or the feet for example, we can easily see how the central nervous force which governs it, being the same as before, must exercise the same amount of energy as before, and furthurmore, that energy must be sent out through some of its channels. If this is arrested in one part, it goes out with increased intensity to another. Inflammation, practically, is simply an exaggerated condition of health. In other words, in inflammation the normal processes of health go on, but with increased intensity. And so we see how the draft of air on the back of the head, or a chilling the feet, hampering or arresting the processes of nutrition and heat-production in some other portion of the body, may result in an attack of bronchitis or cold in the head.

While, practically, there is no specific method which will prevent the inflammatory process which results from cold doing a certain amount of permanent mischief, a knowledge of certain laws of right living, will enable us to avoid the evil results of exposure in a majority of instances.

These preventive measures consist practically in the proper regulation of the clothing, the maintenance of the skin in its best functional activity by the daily use of the bath, the proper ventilation of our living and sleeping apartments, and certain other more general measures.

The body should be covered equably and with sufficient clothing to keep it comfortable. This clothing should be equably distributed in front and behind.

It is a matter of some importance, after having adopted a system of clothing, to maintain it with a certain degree of consistence. This, perhaps, is not always possible,

and yet it is a rule which should be borne in mind.

Light weight woolen underclothing, the same weight being worn the year round, is preferable to cotton or silk, or to attempting to adjust different weights of woolen underclothing to the varying temperature. Wool is not only warmer in winter, but cooler in summer.

In the use of the cold bath, we possess a measure of the greatest possible value in enabling us to avoid taking cold in our temperate climate, characterized as it is by such marked and great seasonal, and even diurnal, changes in temperature and humidity. Of course, it is not every one that can take a cold bath daily. For those who can, this should be enjoined as a hygienic measure where there is any liability to taking cold or a tendency to catarrhal or bronchial disorders.

In old age, in infancy and early childhood, the vigor of the system is, perhaps, not equal to a cold plunge. Still, I think we should, as far as possible, make use of the beneficial effect of cold water where there is any liability to cold or a tendency toward catarrhal trouble. If the cold plunge is not available, the sponge should be used, modifying the temperature of the water of the bath until its use is attended with no unpleasant symptoms, but rather with good effect.

A certain amount of outdoor exercise every day, I think, adds very much to the general tone of the body, and aids notably in our endeavors to correct the habit of taking cold. This may be done by walking, horseback riding, or in other forms. The only question for discussion here is that of the kind of weather in which one should go out of doors. This, perhaps, has no special bearing on exercise, and yet I think it is one on which there are many mistaken ideas prevalent. I regard it as a wise and safe rule to take a certain amount of exercise every day, and that this should be done in the open air if possible. The important point, and the one on which I would lay special emphasis here is, that the conditions of the outdoor weather should not have a great degree of influence upon us. Many people are accustomed to confine themselves closely to the house when the east wind blows, or when the weather is damp or rainy. This, I think, is unwise. It is a very simple thing to protect one's self from any ill effects that can be experienced from an east wind or from rain. The same also should be said of night air. It is a popular impression that night air is irritating. Night air is the only air there is to breathe at night, and there is nothing in air that is in the slightest degree irritating to the air passages.

Recognizing the fact that an exposure to cold results both in a local inflammatory process and a general systemic condition, our measures of treatment, necessarily, must be directed to both. In many instances, undoubtedly, a cold can be broken up, or aborted, as we call it, at its onset. The period during which this can be accomplished, usually is from twenty-four to thirty-six hours after the exposure. Hence, measures for the accomplishment of this should always be instituted, if opportunity presents, in preference to local measures of treatment.

To abort a cold, the stereotyped treatment is, to secure free diaphoresis, and administer quinine and opium.

In connection with the above measures, it is always well to administer a laxative, say 10 grains of calomel, to be followed in the morning by a Seidlitz powder or a glass of bitter water.

Another popular way to abort a cold is to induce diaphoresis by administration of nitrate pilocarpine, grain ¼, subcutaneously, accompanying this by some such mixture as:

℞ Liq. ammon. acet., ʒ j.
Sp. æth. nit., ʒ ss.
Sweetened camphor water, ℥ j.

Adding to each dose of this 2 minims of tincture of aconite, if there is any febrile disturbance, repeated till free diaphoresis is obtained.

For local treatment in the early stages where the inflammation is confined to the nasal passages, we may, I think, safely prescribe as follows:

℞ Cocaine muriate, grains x.
Morphine, grains v to x.
Aquæ, ℥ j.
M. Sig.—Use with atomizer every 3 hours.

The fluid cosmolin or benzoinol may be substituted for the ounce of water in the

above prescription, in which case it will be necessary to use the atomizer for the application. In lieu of an atomizer, the above fluids can be applied to the nose by an ordinary dropper and drawn in by insufflation.

It is sometimes more convenient to prescribe these remedies in the form of a powder, in which case we may give as follows:

℞ Cocaine hydrochlorate, grains v.
Pulv. magnesia, ʒ ss.

to which may be added, if advisable, a grain of morphine.

Those drugs which belong to the mint series seem to have a notably agreeable action on the inflamed mucous membrane of of the nose. Just what this action is, I am by no means certain. These may be given in the form of a snuff, as follows:

℞ Menthol. pulv., grains ij.
Bismuth. sub. carb., ʒ j.
Sachar. albæ, ʒ iss.

Camphor is a remedy which of late years has come much into vogue in these disorders, and undoubtedly has an excellent effect, and may be added to either of the above prescriptions for snuffs in the proportion of 2 grains to the ounce.

There are certain remedies which are useful in the form of inhalations, such as acetic acid, ammonia, iodine, etc. Patients always find their use agreeable, both on account of the relief experienced and the facility with which they are applied. A popular German remedy, known as Hager's, is as follows:

℞ Carbolic acid, 1 pint.
Strong alcohol, 3 pints.
Caustic ammonia, 1 pint.
Distilled water, 2 pints.
M.

This is placed in an open-mouthed bottle, and the fumes inhaled through the nose. An old-fashioned domestic remedy consists in the placing upon a stove, a cup containing equal parts of vineger and water, the fumes of which are driven off by the heat and pervade the room in which the patient sits. Based somewhat on this method is the remedy recommended by Fritsche, as follows:

℞ Acidi acetici glacialis,
Acidi carbolici, ää grains ij.
Mist. oleo-balsamic, grains viij.
Tinct. moschi, grains i.
M.

This is a somewhat dainty little prescription, which can be placed in a lady's vinaigrette for inhalation.

The above methods of local relief afford us measures by which much can be attained in the way of ameliorating the attack, and, used in connection with the internal medication suggested before, we may remove very much of the discomfort which accompanies the inflammatory process; and yet it must be understood that they are not directly curative.

One measure is unfailing in the arrest of an attack of acute rhinitis, and that consists in a very simple plan of local treatment, which is to be carried out by the physician only. A 10- or 20-per-cent. solution of cocaine is sprayed into the nasal cavities, the parts being watched carefully, and a sufficient time allowed to elapse until the membrane is not only completely anæsthetized, but also completely exsanguined. This is recognized by ocular inspection, and by means of the probe, which should be passed over the membrane to test not only its sensibility but the extent to which the blood has been expelled. When this is accomplished, it will make itself evident by the appearance of the mucous membrane, in a pale pinkish tinge, clinging closely to the turbinated bones beneath. When this condition has been obtained, the membrane is to be carefully wiped off repeatedly by means of pledgets of cotton until it is absolutely dry on the portion covering the anterior projection of the lower turbinated bone. When the membrane is thoroughly dry, a few crystals of chromic acid are to be fused on the end of a small probe, after which the superficial portion of the mucous membrane, covering the prominent area over the lower turbinated bone, is cauterized in a small rounded disk from one-quarter to one-third of an inch in diameter. The action of the chromic acid is to coagulate the albumen in the superficial layers of the mucous membrane, thus changing the soft, yielding, and elastic membrane on that portion into a hard, inelastic slough. What is accomplished now is, that the blood having been expelled from the membrane, the local conditions which constituted inflammation have been eliminated. The return of the blood to the part is prevented by thus

rendering the superficial layer of mucous membrane inelastic by chromic acid. The effect of this slight superficial cauterization of a limited portion of the area of the membrane covering the lower turbinated bone, is to diminish the blood circulation in the whole of the membrane covering the lower turbinated body. This little operation may be done on one side, or both, at the same sitting, although I think, as a rule, it is preferable that a few hours should elapse, or better twenty-four, when if necessary the operation may be repeated on the other side. I have repeated this procedure in such a very large number of cases with perfect success, that I do not hesitate to describe it as by far the most successful means that we possess for arresting the local lesion of an ordinary cold in the head.

Acute Pharyngitis.—This is a name usually given to an ordinary catarrhal sore throat, and consists in an inflammation of the mucous membrane, not only of the pharynx, but also of the soft palate and uvula. The tonsils are liable to be the seat of notable swelling at the same time. This affection is not, ordinarily, of a very serious nature, and yields readily to mild remedies, such as a gargle of a weak solution of alum, borax, chlorate of potash, tannin, etc. A very nice way of using the chlorate of potash in an attack of this sort is in the following prescription:

℞ Chlorate of potash, gr. xxx.
Pulv. acaciæ,
Sach. alb., ää ʒ ss.

A small portion of this is to be taken on the tongue and allowed to melt in the mouth. In the act of deglutition it is distributed over, and comes thoroughly in contact with, the parts. It should be borne in mind that the pharynx belongs properly to the food tract, and a diseased condition in this region is frequently associated with disturbance of the digestive apparatus. Hence, it is well to direct the patient to take for a few days a small dose of bitter water before breakfast each morning, to produce a slightly laxative effect on the bowels. Painting the parts with a ten-grain solution of nitrate of silver, or tannin and glycerin, is always attended with good results.

Acute Naso-pharyngitis.—This is an acute inflammation of the mucous membrane lining the vault of the pharynx. It is ordinarily regarded as a form of cold in the head, and I think a mistake is not infrequently made in failing to make a differential diagnosis between an acute naso-pharyngitis, and an acute rhinitis, or an ordinary attack of influenza. The two conditions, however, are totally distinct, although the symptoms are somewhat similar. In acute naso-pharyngitis, while there is considerable irritation of the nasal cavity, there is no active inflammation of its mucous membrane giving rise to stenosis, with profuse discharge. Sneezing occurs, although this is not directly symptomatic of the naso-pharyngeal disorder. The prominent symptoms consist of a deep-seated pain in the region between the nose and throat, aggravated somewhat on deglutition, with a semi-deceptive sensation of abnormal dryness or stiffness of the parts. In addition to this there is considerable constitutional disturbance, the thermometer showing a temperature of from 101° to 103°, while the feeling of general depression or *malaise* is always quite noticeable. Furthermore, while a cold in the head lasts usually from three to eight days, an acute naso-pharyngitis for a month or even longer, the active febrile disturbance subsiding, but a more or less sense of discomfort, with hypersecretion, persisting to the end. The secretion is discharged both into the fauces and and through the nasal cavities, and consists of a semi-transparent, whitish-gray, somewhat tenacious mucous.

An important feature in the treatment of this disease consists in the administration of general tonics, which should be given early in the attack and continued while the symptoms persist. If the patient is anæmic, iron should be given, but the prominent indication is in the use of barks. Of these I prefer the salicin, or willow bark in 10-gr. doses, given four times daily, increasing the dose, if necessary, to 15 or even 20 grs. For the same purpose, quinine in 3 to 5-gr. doses may be administered, although I think usually the salicin will give better results. The local application to be used here consist in the daily use of the post-nasal syringe, the fluid being a solution of borax or chlorate of potash of the strength of 5 to 10 grs.

in an ounce of water, the temperature of which should be from 70° to 80°, or even hotter, if such can be borne. This should be done at the hands of a physician, or by the patient himself if he can acquire the necessary dexterity, by means of the ordinary post-nasal syringe, or by the Warner douche. An excellent substitute for the post-nasal syringe is the Thudichum douche, from half a gallon to a gallon of hot fluid being allowed to pass through the nasal chambers in this way. A certain amount of relief can be accomplished by painting the parts with the glycerol of tannin, or better still, perhaps, a 5 to 10-gr. solution of nitrate of silver. This may be passed directly through the nasal chambers, or up behind the palate, by means of a properly curved cotton-holder. In the early stage of the attack much can be accomplished by the use of aconite, which in many cases seems to exert almost a specific influence on the course of this disease, if administered sufficiently. This should be administered in the form of the alkaloid, aconitia, in doses of one-five-hundredth of a grain. I usually direct the patient to take each morning after breakfast one dose every hour, until four have been taken, and repeat the same on the second, third and fourth days, if necessary; the administration of the drug being governed somewhat by the results. Occasionally, where I have been unable to observe the patient carefully, I have directed the aconitia to be administered every hour in the above dose, until evidences of its physiological effect have been obtained, in the tingling of the lips and extremities, with the characteristic burning sensation in the fauces.

Acute Laryngitis.—This is the name we give to an acute inflammation involving the mucous membrane lining the larynx. It is mild in character, and gives rise merely to hoarseness and loss of voice. A certain amount of gravity attaches in the minds of the laity to any impairment of the voice, but as a matter of fact, the mere loss of voice is ordinarily a somewhat trivial symptom. It becomes grave, of course, in connection with phthisis, syphilis, or cancerous disease, and perhaps it is this association which leads the laity, as a rule, to attach so much seriousness to its occurrence. In the very large majority of cases, if not all, it is secondary to trouble of the air-passages above. The course of events is as follows: A chronic rhinitis, or a chronic naso-pharyngitis; then arises a mild chronic inflammation of the mucous membrane lining the larynx. In consequence of this, chronic laryngitis develops a tendency to slight colds, under the influence of which the mild chronic inflammation in the larynx is lighted up into an acute process, causing hoarseness and loss of voice. These latter two symptoms constitute practically the only symptoms, although occasionally we may meet with more or less irritation, hyper-secretion and cough. The proper treatment of this affection consists in the relief to such disease as may be found in the air-passages above. This ordinarily will be quite sufficient to relieve the local condition of the larynx, although, undoubtedly more prompt relief may be accomplished by the local application of astringents directed to the laryngeal cavity. Also inhalations by means of the steam atomizer, or by applying heat to certain of the volatile oils or resins, such as benzoin, eucalyptol, pinus Canadensis, camphor, and creosote. These are often used with a certain amount of relief, although not prominently indicated—the main resource for successful treatment of this affection being in treatment of the diseased condition of the parts above.

Acute Tonsillitis, or Quinsy.—This affection I regard, in a very large majority of instances, as a manifestation of the rheumatic habit. Hence, while local applications, such as we have spoken of in connection with acute pharyngitis, may afford a certain amount of relief, the prominent indication consists in the administration of anti-rheumatic remedies. Of these none is to be relied upon with more certainty than the salicylate of soda, as follows:

℞ Sodii salicylatis, ʒ ij.
Water, ʒ vj.
M Sig.—A tablespoonful every two hours.

In the early stages of an attack there may be given, in connection with the above prescription, 3 minims of tincture of aconite, to be continued until its constitutional effect has been produced, after which, of course, its administration is permanently abandoned. In

addition to the internal administration of the salicylates, much relief can be afforded to local symptoms, while at the same time the progress of the disease, in many cases, may be arrested or mitigated by directing the patient to apply bicarbonate of soda to the inflamed region. This is easily accomplished by simply wetting the finger and dipping it into the soda, and passing it well into the fauces, spreading over the swollen palate and tonsils. This plan of treatment ignores entirely the old-fashioned domestic remedies, such as poultices, cold compresses, hot compresses, boiled onions, and other external applications. Their efficacy is exceedingly doubtful, and in many cases they add to the discomfort of the sufferer.

The tendency of this disease is to suppuration, and our efforts are confined mainly to aborting the disease; failing this, towards hastening suppuration. If the latter is threatened, it becomes necessary to thoroughly examine the parts by means of the forefinger inserted into the fauces, in order to detect the earliest evidence of suppuration, and also to detect the point at which the abscess tends to approach the surface; this information being used as a guide to the free use of the knife. Of course, when the abscess has been opened and the pus evacuated, the attack is practically cured. Even where the suppurative point is not discovered by palpation, I think much relief is often given by puncturing the tumefaction in the fauces by means of a slender sharp-pointed bistoury, in order to relieve the vascular tension by blood-letting, thereby giving a certain amount of relief to the pain which attends the progress of the disease.

Acute Follicular Tonsillitis. — I do not regard this disease as the result of a cold, but rather as closely allied to croup and diphtheria. It is not, however, from a clnical standpoint, usually associated with either of these diseases, nor does it manifest any tendency to develop into them. The disease is really, I think, a constitutional affection, with local manifestation in the fauces, which consists of a fibrinous exudation in the crypts of the tonsils. As evidence of the constitutional character of the disease, we usually have its onset marked by a well-developed chill or by decidedly chilly sensations. This is followed by notable febrile disturbance, the temperature rising to 103° and 104°, and even higher in young children. It runs its course in from five to seven days, and disappears spontaneously. The local exudation into the tonsils gives rise to an amount of pain referable to these regions, which is very great at times, while at the same time the general disturbance and prostration is quite marked. The indications for treatment consist in the administration of anti-febrile remedies, according to the extent of the fever; while the local symptoms are usually combated by the administration of a solution of tincture of iron and glycerin in the strength of one drachm to the ounce. This is to be given in from half a teaspoonful to a teaspoonful dose every two hours. I know of no better remedy for controlling the localized pain in this disease than the above, in that in its passage over the parts it seems to have a specific action, not only on the local catarrhal inflammation, but on the exudate also, while at the same time it gives marked relief to the painful symptoms. If this disagrees with the stomach, it may be necessary to make local application to the parts of perchloride of iron.

After the local inflammation subsides, it is well to administer some general tonic, in that the patient is liable to be left in a condition of considerable prostration after the disease passes away.

The main importance which attaches to acute follicular tonsillitis, really, I think, consists in the accuracy of the diagnosis. This is easily made, and should always be with confidence, on account of the exceeding gravity which attaches in the minds of parents to any exudate in the fauces of children. I believe that not infrequently follicular tonsillitis is confounded with diphtheria. That there is no direct connection between the two diseases, I am confident. Furthermore, the characteristic appearances are so distinct as to render a diagnosis quite certain in all cases; indeed, the affection is oftentimes designated as a diphtheritic sore throat, which of course is an error: The diagnostic points consist in the fact that in diphtheria the temperature is low, the exudate a broad membrane, thick and velvety in appearance, yellow in color, and giving rise, as a rule, to no localized pain or inflammation at its onset. In follicular tonsillitis, on the other hand, the fever is high, the exudate appears simply at the orifices of the crypts and does not give rise to a membrane; there is considerable localized pain, with inflammation. Furthermore, the color of the exudate is of a bluish-white opaque tint, meagre in its distribution, showing no efflorescence or tendency to spread.

Correspondence.

MOUNTAIN RESORTS OF SAN DIEGO COUNTY, CALIFORNIA.

Editor MEDICAL AGE:

The sanitorial reputation of Southwestern California is by no means dependent upon its seaside resorts. Of these, perhaps the most widely known are: San Diego, Coronado Beach, Tia Juana, and Pacific Beach, as having in common the warm ocean currents peculiar to this part of the coast, a light annual rainfall, and almost perennial sunshine. Parallels of latitude have failed to convey an adequate idea of their meteorology and salubrity; and as the Atlantic Coast possesses no territory which is neither too hot nor too cold, isothermic comparisons are equally out of the question. One must see and enjoy, to be convinced of their excellence.

In obedience, however, to the prevailing "fad" or rage for altitude, which attracts so many of our people to foreign lands, as though elevation and pure air were exclusively Alpine, I desire to call the attention of your readers to this western slope. Sixty miles from the coast, and practically bisecting this immense county from north to south, is the Cuyamaca range of mountains, where one may attain and enjoy an elevation of from 1,500 to 6,000 feet, under the most unique and favorable conditions. A day's jaunt by railroad and Concord coach brings one to the very summit, if such be his aspirations. And here, nestled in a mountain depression, is the hamlet of Julian, probably one of the most picturesque mining camps on this continent. It is environed with gold-bearing ledges, which are turning out golden grist to the stamp, stamp, stamp, of half-a-dozen quartz mills.

Eight miles south of the town is the famous Stonewall Mine, the property of our governor, W. S. Waterman. Though not listed in Wall street, the May clean-up is said to have aggregated $65,000!

The view from the mountain crest is at once varied and charming. Sixty miles to the west the Pacific Ocean may be discerned shimmering betimes in a sunset glow, and by the way, these sunsets are said to lose nothing by contrast with those of Italy. Turning to the East, the landscape becomes a dead ocean, the great desert, whence came the treasures that are stored up in these mountain fastnesses; as far as the vision can traverse, nothing but sand and cactus. Refracted vision may picture imaginary lakes, rivers, and other phantoms, but there is not a drop of water within a hundred miles!

But now for the salubrity of this mountain region. At one point the air is redolent with the fragrance of pine and fir. At another majestic live oaks afford a grateful shade, *while the ever-ascending warm currents from the desert below deprives the air of its humidity and chilliness.* The writer has scaled these mountains at dawn, and, though the altitude was more than 6,000 feet, all thoughts of discomfort were banished by the carols of countless birds and the "pleasing prospect." Snow and rain in mid-winter are not unfrequent visitors, but neither of long duration.

Mineral and pure water springs of various temperatures* abound on every hand, and mountain brooks, suggestive of one's Eastern home. Fish and game of different kinds contribute to the pleasure of a sojourn here. Besides wild berries, this region is already famous for its deciduous fruits, which equal, if they do not surpass, those of more Northern latitudes. This is also one of the sources of San Diego's water supply, which hurries down the mountain slopes through the longest flume in the world! In its construction 9,000,000 feet of lumber were required at the expense of 9,000 trees!

In the absence of meterological data, observation convinces me that the seasons are generally mild and delightful. Pneumonia and allied maladies are of rare occurrence. Quite a number of asthmatics have experienced their first climatic relief in these mountains. The settlers of twenty years ago do not regret their choice, and are a hardy race.

In conclusion, when we add to these commendable features the horticultural and mining possibilities referred to, the term unique does not seem to be a misnomer.

C. M. FENN, M. D.

SAN DIEGO, CALIFORNIA.

*The Aguas Calientès (Hot Springs) have long been locally celebrated for the cure of rheumatism and other diseases.

SUCCESSFUL TREATMENT OF DIPHTHERIA.

Editor MEDICAL AGE:

During the past eighteen months, I have treated successfully sixty-seven cases of diphtheria, and a much greater number of other inflammatory diseases of the throat, with applications of ice or snow, acetanilid, and bi-carbonate of soda. The ice was finely pounded, folded in a thick towel of a length sufficient to reach from ear to ear around under the chin, and pin on top of head. This was renewed when melted, until the fever abated. To a child of five years, I gave five grains of acetanilid every three hours (increased or decreased according to age), until the temperature fell to normal. Thirty grains of soda bi-carb. were blown dry, into the throat every four hours. Within from six to eighteen hours, all active symptoms of the disease disappeared; the throat then had a shriveled appearance, and was free from deposit. At this time the patient usually fell into a quiet sleep, awakening practically well. In none of the cases were there any of the troubles that so frequently follow diphtheria, and only in five was it necessary to visit again after the third day—in the latter the directions were not properly complied with; when carried out, the cases promptly recovered. While I may not be able to always say whether a given case is or is not diphtheria, the sixty-seven cases I record were unmistakeably diphtheritic, deaths having occurred in several of the same families a few days previous.

I am pleased to say that since using this treatment, not one case, so far, has resulted in death. It has given equally good results in most acute inflammatory diseases of the throat, including "quinsy."

I do not claim any originality in using the ice pack in this way, but I wish to recommend it as the most successful treatment I have yet tried, and during twenty-eight years of practice I have gone over the ground pretty thoroughly.

FRANK P. WILSON, M. D.

EAST TOLEDO, OHIO.

RUPTURE OF UMBILICAL CORD.

Editor MEDICAL AGE:

A peculiar case of this kind happened in my experience a short time since, and having read of nothing similar, I report, hoping someone will be able to further contribute to the literature of the subject.

Oct. 23d last, I was called to Mrs. R., finding her in the first stage of labor. The occiput was in the left anterior position, and labor progressing favorably. In seven hours labor terminated; but when the head was engaged in vulva, the pains, which were apparently sufficient, failed to deliver, whereupon I suspected the cord was around neck of child. Upon attempting to verify my supposition, the finger came in contact with cord, and at the same instant pain came on that ruptured the funis, and delivered the head. The pains ceasing, I delivered the shoulders quickly. Upon examining child, I found the cord torn away at umbilical attachment, leaving umbilicus somewhat concave, with considerable hæmorrhage from torn surface. Checked to a very great extent the hæmorrhage by means of absorbent cotton saturated with vinegar. As soon as perchloride of iron could be obtained, I placed a compress of cotton saturated therewith upon the umbilicus, and applied a bandage over all. In a few hours compress was firmly attached, and it came away at usual length of time required for cord to fall away.

T. E. DRYER, M. D.

BIRMINGHAM, ALA.

BEEF-CACAO AS A NUTRIENT IN PUERPERAL FEVER.

Editor MEDICAL AGE:

The following case may be of interest to your readers:

Mrs. L., had been sick some three weeks with puerperal fever. There was complete anorexia, no desire whatever for food or drink, except water. During her convalescence, she gained strength very slowly, so that I had grave fears of relapse and a fatal termination of the case. Beef-cacao having been brought to my notice, it occurred to me she might assimilate this, and so the patient was persuaded to taste it. She drank, at once, the entire cup of beef-cacao, and desired more; and with beef-cacao as a diet, she began to improve, and was very much brighter the next day. In three days her improvement was remarkable, and though very low before, she went on to convalescence. She naturally thinks beef-cacao the best food for the sick ever presented, as do I myself. I may add that, before trying the beef-cacao, this patient had eaten practically nothing for eighteen days.

E. W. HARRISON, M. D.

FORT SMITH, ARK.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., JAN. 26, 1891.

Editorial.

NEWS FROM BERLIN AS TO THE KOCH METHOD.

The recent communications of Koch have at least partly divulged the long-treasured secret of the composition of the now famed "lymph." From his description as published in his latest expressions, it would appear to consist of certain substances extracted by means of a 40- or 50-per cent. solution of glycerin from a pure culture of tubercle bacillus. He states that the precise nature of the active principle is at present unknown to him, although some of its physical properties have been ascertained —such, for example, as that it is not soluble in alcohol, but precipitable by that substance, although not in a pure state. The efficient principle seems to him to be an albuminoid derivative, but not to belong to the so-called tox-albumins, from which it differs by withstanding high temperature, and by passing readily through the membrane of a dialyzer. It is estimated to constitute less than one per cent. of the solution, and this leads Professor Koch to remark upon its extraordinary potency as a poisonous or therapeutic agent.

Koch was guided to his discovery by observing the action of tubercle bacilli, living or dead, on tuberculous and non-tuberculous Guinea-pigs. In the healthy animal, an inoculation of the pure cultivation gave rise, after a period of incubation varying from ten to fourteen days, to a hard nodule, which soon broke down into an ulcer, and persisted until the animal died. When, however, a Guinea-pig, already tuberculous, was thus inoculated, no nodule formed, but the superficial tissue at the place of inoculation became necrosed and fell off. Injections of a quite dilute glycerin infusion of a pure cultivation, caused the animal's condition to improve. Evidently, having got thus far in his observations, Koch was unable to overlook the obvious suggestion that even dead bacilli, or at least a solution of some of their constituents or products, contained something that might be made available as a drug, and produce the same effect. It was then, therefore, a comparatively simple matter to arrive at the production of the curative liquid now in use. There seems no reason why it should not now be prepared in any well-equipped bacteriological laboratory, and thus the restriction heretofore put upon its general employment be ended. In the absence of a more detailed account of its preparation than Professor Koch gives, it may, we think, be assumed that any person who would consider himself conversant enough with bacteriological methods to attempt the work of producing such a liquid, would not, even without a hint as to the steps in the process necessary, have been in the least likely to produce an agent more dangerous than the Koch liquid itself. But Professor Koch feared such an occurrence when he first promulgated his method of treating tuberculosis. He now brings up in support of his previous secrecy, the argument that the less clinicians knew about the nature of the liquid, the more unbiased would be their observations of its action.

As to the production of the "lymph" by the German Government, about which so much has been said, a correspondent of the British Medical Journal says:

During the last fortnight various rumors have been telegraphed from Berlin as to the arrangements made, or about to be made, between the German Government and Professor Koch with regard to the future production of his remedy for tuberculosis, and it must be admitted that these rumors have been of a somewhat disquieting character. It has been said that Dr. Koch, and each of his assistants, had accepted a large immediate payment, and that they were to receive a royalty upon all sales in the future. Thus stated, the arrangement, it must be admitted, would partake far too much of the commercial transaction to be agreeable to the traditions of the medical profession, or the customs of men of science. It is, however, easy to give an unfavorable

complexion to a transaction really of an honorable nature, by inverting the steps by which the final results have been obtained, and so misrepresenting their character. It may be well to recall the circumstances under which the "lymph" has been discovered, and the position of Dr. Koch in relation to the German Government. Dr. Koch has been for many years the director of the Hygienic Laboratory in Berlin, a Government Institution, maintained by the Educational Department of the German Government; and Dr. Koch, as its Director, has been an officer of that Department. All the earlier experiments for the discovery of the now famous "lymph," were conducted in Dr. Koch's own laboratory in the Hygienic Institute, and there the observations upon Guinea-pigs and other animals, which emboldened Dr. Koch to proceed to inoculate human beings, were made. The laboratory, however, presented no facilities for making these investigations upon human beings, and Dr. Koch holds no official position with regard to any of the Berlin hospitals. He therefore found himself in a practical dilemma, inasmuch as if he were to make his experiments in a public hospital, it was feared that the premature and eager discussion of incomplete observations and immature results, might tend to interfere materially with the investigations, and to produce evil results. Dr. Koch consequently hired a private house at his own expense, and obtained the assistance of two gentlemen with whom he had private acquaintance—Dr. Libbertz, an old schoolfellow, and Dr. Pfuhl, his own son-in-law. The "lymph" was prepared in considerable quantities in this private house by these two gentlemen under Dr. Koch's supervision, and the earliest injections in man were made in the private hospitals of Drs. Cornet and Levy. It soon became evident, however, that the interest, both among the general public and in the medical profession, was too keen to permit of the continuance of the investigation upon these lines; and Dr. Koch, acting on the advice, or perhaps it might be correct to say upon the instructions, of Herr von Gofsler, the Minister of Education, published the now famous preliminary paper, and distributed the "lymph" to certain of the hospitals in Berlin. Meanwhile the manufacture of the "lymph" was carried on in the private house of Dr. Koch by his two personal private assistants. Recently this arrangement has ceased; the house in which the "lymph" is manufactured, has been given over to the Education Department of the German Government, and Drs. Pfuhl and Libbertz have become officers of that department. The Koch Institute, which the German Government is now erecting, will consist of two parts—a laboratory and a clinical department containing 150 beds. The clinical department will probably be under the direction of Professor Brieger. The observation and treatment of the patients received into it, it is hoped will afford, in the future, opportunities for Dr. Koch to prosecute his studies with regard not only to tuberculous diseases, but to tetanus, diphtheria, and typhoid fever. In this way the inconvenience which has arisen from his having no clinical wards of his own will be avoided.

In the laboratory, bacteriological investigations will be carried out, and at the earliest possible date the laboratory for the preparation of anti-tuberculous liquid will be transferred to this department of the Koch Institute. The director of this bacteriological department has not yet been appointed, but the whole Institute will be under the general direction of Dr. Koch, who will remain an officer of the Education Department. It is probable that the German Government will offer to Dr. Koch some recognition of the great services he has rendered while acting as a German official, such as was voted to Jenner for his services in a cognate research. Large National rewards have repeatedly been made to successful generals, in Germany and in other countries, and it is felt that there is no reason why a man of science, who has worked for the relief of human suffering, should hesitate to accept a reward which the destroyers of men have never felt the least compunction in receiving. As to the further rumor that Dr. Koch and his assistants may receive payment, as it were, by results in the future, it may be held that this rumor is unfounded. Anything like the sale of a secret, or the paying of royalties on, a remedy, would be contrary to the Hippocratic tradition.

Mr. Henry Campbell, Pharmaceutical Chemist, Queen's Hospital, Birmingham, affords, in the Journal quoted, the following notes on the proper dilution and use of Koch's "lymph:"

Dr. Koch's "lymph" for the treatment of tuberculosis is sent out in stoppered bottles, each containing five cubic centimetres. It is slightly viscid, and has a specific gravity of 1150. It keeps well with ordinary care.

The dose for an adult ranges from 0.001 cubic centimetre to ten times that amount, 0,01 cubic centimetre. In some reports these quantities are called one milligramme and ten milligrammes (or a centigramme) respectively. This is not strictly correct,

for 0.001 cubic centimetre of the lymph weighs slightly more than a milligramme.

For hypodermic use the "lymph" is diluted, a one-per-cent. solution being usually the most convenient; but in some cases a stronger solution (ten-per-cent.), or a weaker (one-tenth-per-cent., or 1 in 1,000), is desirable.

If a dilution made with distilled water is to be set aside for a few days, it must first be raised to a boiling point—a process which Dr. Koch states is likely to weaken it. It is better, therefore, to dilute with a one-half-per-cent. solution of carbolic acid. If a dilution becomes turbid, it is unfit for use.

All measuring apparatus and bottles used to prepare the dilutions should be rinsed with the carbolized water, drained, and kept free from dust, and the hypodermatic syringe washed with absolute alcohol, and then with the carbolic diluting fluid. Alcohol renders the stronger solutions slightly turbid.

To make the diluting fluid (one-half-per-cent. carbolic), place a pint of distilled water in a flask, marked at that volume, boil for five minutes, add forty-four grains of pure carbolic acid, boil for another minute, cork up, and remove from the heat. When cold, dilute if necessary to one pint with boiled distilled water.

To make the dilutions (metrical system), attach an ordinary half-ounce glass syringe by India-rubber tubing to a pipette of one cubic centimetre capacity, and deliver half a cubic centimetre of lymph into a ten-cubic centimetre measure. Rinse the pipette twice with the diluting fluid, add the rinsings to the "lymph" and dilute the whole to five cubic centimetres. Place in a stoppered bottle, and label, ten-per-cent. solution, No. 1; 0.01 cubic centimetre of solution contains 0.001 cubic centimetre of "lymph."

In the same way, dilute half a cubic centimetre of No. 1 up to five cubic centimetres, and label (one-per-cent. solution, No. 2); 0.1 cubic centimetre contains 0.001 cubic centimetre of "lymph."

If required, dilute half a cubic centimetre of No. 2 up to five-per-cent. and label (one-tenth-per-cent. solution, No. 3); 1.0 cubic centimetre contains 0.001 cubic centimetre of "lymph."

The special hypodermic syringe used by Dr. Koch contains (when filled to the mark nearest to the India-rubber ball) one cubic centimetre, and is graduated into ten divisions. Therefore:

A syringeful of No. 1 dilution=0.1 cubic centimetre of "lymph."

A syringeful of No. 2 dilution=0.01 cubic centimetre of "lymph."

A syringeful of No. 3 dilution=0.001 cubic centimetre of "lymph."

While Virchow's criticisms of Koch's method, based on pathological investigations, were at first very radical, latest advices would indicate that the statements of this distinguished pathologist have been somewhat modified by his more recently expressed opinions.

It is certain, however, that all experimentors, in this country and abroad, are inclined to hold the question of its value *sub judice*, until evidence of its scope and application is more fully demonstrated than at present.

INFLUENCE OF AGE ON THE RAPIDITY OF ABSORPTION OF DRUGS.

Dr. Yatsuty has published the results of some experiments which would seem to indicate that the rapidity of absorption of drugs diminishes as age advances.

This observer's experiments were conducted in the Zhitomir Municipal Hospital, of which he is medical officer, and on healthy male subjects of from eight to over eighty years of age, the drugs experimented with being iodide of potassium and salicylate of soda. The dose was made to depend upon the body weight, a grain being allowed for each 10 kilogrammes. Thus a boy weighing 25 kilogrammes was given 2½ grains of iodide of potassium or salicylate of soda as the case might be, a man weighing 55 kilogrammes being given a 5½ grain dose. The drug was administered in a gelatin capsule, and the urine examined every three minutes in the case of both salts. With the iodide, the saliva was also examined every two minutes. This was not done in the case of the salicylate, as in no case was any evidence of salicylic acid detected in the saliva. Dr. Yatsuty gives a tabular view of the experiments, the general result being that the younger the subject the more rapidly had absorption, as evidenced by testing the secretions, occurred. Thus a boy of nine, weighing 25 kilogrammes, taking a dose of 2½ grains of iodide of potassium, generally gave the reaction in the urine in nineteen minutes; a man of thirty-six, weighing 66 kilogrammes, and taking a dose of 6½ grains, showed no reaction in the urine until thirty-one minutes had elapsed; and a man of

seventy-six, of about the same weight, and taking the same dose, showed no reaction in the urine for thirty-seven minutes. Salicylate was absorbed in boys and young men in about fifteen minutes, while in middle-aged men it required about twenty minutes, and in old men about twenty-five minutes. There were some exceptional cases. Thus, some lads of eighteen showed no iodide in the urine until thirty-one minutes; one man of seventy-seven showed it in twenty-eight minutes; so that, although the average rapidity of absorption distinctly diminishes as age advances, it is not possible to say with certainty that a particular individual will absorb one of the drugs mentioned more rapidly than another who is a great deal older.

THE LOVE OF DRUGS.

Under this title, the British Medical Journal informs us of some peculiarities of American girls. We fear the ideas of our London contemporary of the habits of American girls, are influenced by insular prejudice.

Not long ago we were informed that strychnine and morphine were the tipples and "pick-me-ups" of the ladies of America, and now we learn that these unfortunates are, alas! addicted also to the quinine habit. Not only this, but the insidious suggestion is made that the next fashionable habit established in America will be the ether habit. Quoth our contemporary:

It is an innate idea of the English and American mind, that there must perforce be some drug adapted to the ever-varying states of the body which contains it.—So many disorders, so many remedies. The faith that never wavers, that Nature has a panacea for every ill, is touching to witness, and seems to flourish in an age of science and skepticism as vigorously as in the past. Americans, especially, exhibit a robust form of this faith. American girls, it is said, now carry about with them ornamental cut-glass bottles containing quinine pills, with which they dose themselves from time to time. If fatigued, they take two pills; if chilly, one; if hungry (as they generally seem to be), four or five. We believe that ten is the correct dose for wet feet. The quinine bottle is equal to every emergency, and produced on all occasions. We are glad it is no worse than quinine; at one time it used to be morphine and strychnine pellets; it might even now be ether.

ICHTHYOL IN ERYSIPELAS.

Dr. Julius Fessler, who is Professor Nussbaum's assistant, has published the results of his clinical and bacteriological researches of the treatment of erysipelas.

He states that the ichthyol treatment has been adopted extensively in Munich.

From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter form of bacterium that is the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighborhood; ichthyol, in the form of pills, may also be given internally. Where there is a wound, it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment, as compared with ordinary methods, are embodied in several instructive tables. From these it appears that while the mean duration of the cases treated by other methods, from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888, presented a mean duration of under seven days, while in the first half of 1889 it fell to 5·6 days.

BROWN-SEQUARD'S FLUID IN TUBERCULOSIS.

If we are to credit the statements made by Dr. D. Uspenski, in a lecture recently delivered before the Russian Society of Public Hygiene (Deutsche Medizinal-Zeitung, December 29th, 1890), in which he gave an account of some clinical experiments which he had made with Brown-Séquard's "emulsion" this is a remedy of decided benefit in the treatment of tuberculosis in its advanced stages.

Dr. Uspenski tried this preparation in eighteen patients in different stages of the disease. Two of them had been quite given up. In one of these the patient was a lad of 18, who had long suffered from mitral insufficiency, and who became the subject of acute phthisis in the beginning of May, 1890. After all other

means of treatment had been tried in vain, Uspenski had recourse to injections of Brown-Séquard's fluid. After the first three, the general condition and the appetite were greatly improved; and after six injections the patient was able to leave his bed and walk about the room. The treatment was continued with the result that the strength and weight increased, while the temperature gradually fell, and the night sweats diminished. After ten injections the latter ceased altogether, and the patient had so far recovered his strength as to be able to take a long walk in the open air. On June 15th the last injection (the fifteenth) was given, and the patient continued, through the summer, to improve in health, and to gain weight (from 122½ lbs. to 148¼ lbs.). The tuberculous process in the lungs was at a standstill. In the other case the patient was a man, aged 28, who developed phthisis after influenza. There was considerable fever, with profuse night sweats. There was infiltration of the right, and to a less extent, of the left, apex, and tubercle bacilli were present in the sputum. At the beginning of May, injections of Brown-Séquard's fluid were commenced; after the sixth the appetite increased, and after the twelfth the patient's condition was so much improved he was able to leave his bed. After the eighteenth injection the temperature became normal. There has been no increase of weight, nor is there any perceptible amelioration in the condition of the lung. The patient, however, feels much better. In chronic cases the injections act more rapidly. In twelve such patients there was marked general improvement, with reduction of temperature and diminution of night sweats, after from two to four injection. Nine, or at most twelve, injections usually suffice. Even amid the unfavorable surroundings of a prison infirmary, Uspenski obtained good results by this treatment in seven cases. He considers that Brown-Séquard's fluid has a markedly strengthening effect, and is beneficial in all cases of phthisis without exception, whether the patients have any additional treatment or not, and whether they live under favorable conditions or the reverse. The tubercle bacilli do not disappear entirely, even in the most successful cases, but diminish in number in proportion to the extent to which the diseased process recedes. Uspenski says the remedy does not kill the bacilli, but weakens their pathogenic power.

Book Notices.

THE COSMOPOLITAN FOR JANUARY.

The most beautiful frontispiece ever produced in an American magazine, appears in the January number of the Cosmopolitan. It is a reproduction in colors of François Flameng's famous picture "The Cake Seller," and can scarcely be distinguished from the imported photogravure which is exhibited in the dealers' windows, at the price of $7 a copy. It is one of the most charming of subjects, and is well worth framing and preservation. The Cosmopolitan has become noted of late for its frontispieces, and this very much excels its previous efforts.

Among the authors for January are, Mrs. Van Rensselaer Cruger, Frank Dempster Sherman, Henry George, William H. Rideing, Hjalmar Hjorth Boyesen, Edward Everett Hale, Gertrude Franklin Atherton, Murat Halstead, John J. a'Becket, Col. Charles W. Larned, F. O. C. Darley, Elizabeth Bisland, —probably as strong a collection of names as ever appeared in any number of an illustrated magazine in this country.

The number contains the 1st of two parts of Mrs. Van Rensselaer Cruger's new novel, Mademoiselle "Réséda," pronounced by critics the best of her work. Mrs. Cruger is a woman who is intimately acquainted with fashionable circles both in this country and abroad. She writes in a realistic manner, without any of the offensiveness of the average realism. The next article of importance is from the pen of Miss Bisland, "A Visit to the People's Palace in London." A most interesting posthumous paper by F. O. C. Darley, with his own illustration, is also given. John a'Becket's clever story, "Don Gracias," is illustrated in a novel manner, the well-known actors, Sothern and Miss Harned, having consented to pose for the situations, the results being reproduced in photogravure.

TOWN TOPICS.

Town Topics is a journal of modern Society. As in a mirror, it reflects the splendors, the virtues, the vices, the foibles, and the gossip of the currents of metropolitan social life.

And not only this, but it cleverly sketches with piquancy, sometimes with humor or satire, music, drama, literature, art, sport, finance, and whatever goes to make up the medley of 19th century existence.

It is newsy, bright, witty, clever, not to say spicy, and most of all, entertaining.

Subscriptions may be sent direct to office of publication, 21 West 23d St., New York or may be had through any newsdealer. Agency one year $4.00; six months $2.50; three months $1.30. Samples free on request.

WOOD'S MEDICAL AND SURGICAL MONOGRAPHS. December, 1890. Vol. 8, No. 3. This number comprises five essays by well known authors, viz.: Practical Guide to the Demonstration of Bacteria in Animal Tissues, by Dr. H. Kühne; On the Present position of Antiseptic Surgery, by Sir Joseph Lister, F. R. S.; Cancer and its Complication, by Charles Egerton Jennings; The Treatment of Epilepsy, by Dr. Ch. Féré; Handbook to Dr. Koch's Treatment of Tubercular Disease, by Drs. Grün and Severn. Published by Wm. Wood & Co., N. Y.

These are all timely subjects of interest to the medical profession. The eminence of Koch and Lister must secure a wide reading for any views presented by them. The whole subject of Bacteriology has been invested with renewed interest by Koch's discoveries; and Lister, who is the "Father of Antiseptic Surgery," can, of all men, speak with authority on the present status of this question of antisepticism. Cancer and epilepsy are still among the black tracts which obstruct the incurable points athwart the horizon of medical skill, and any new ideas that can be obtained as to their best modern treatment must have a wide audience.

TWELVE LECTURES ON THE STRUCTURE OF THE CENTRAL NERVOUS SYSTEM—For Physicians and Students. By Ludwig Edinger. Second revised edition, with 133 illustrations. Translated by Willis Hall Vitum, M. D., and Edited by E. Eugene Riggs, A. M., M. D., Prof. Nervous and Mental Diseases, University of Minnesota. Published by F. A. Davis, Philadelphia. 1890. Price, $1.75.

The brain will never cease to be a fascinating study until its mysteries of operation and centers of function are more clearly understood than at the present day.

Any contribution to this subject, which clearly defines the limits of our present knowledge, and points out the way to further investigation, is valuable to the extent that it stimulates to further research.

The "ivory gates" have not yet opened all their secrets, and this translation of one who has some original views on this subject, will doubtless be welcomed.

TEXT BOOK OF HYGIENE — A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohe, M. D., Professor of Obstetrics and Hygiene in the College of Physicians and Surgeons, Baltimore, etc., etc. Second edition. Thoroughly revised and largely rewritten, with illustrations and valuable tables. F. A. Davis, Philadelphia, Pa., Publisher. Price, $2.50.

This book of 420 pages has had many changes made in it since its first edition. Its size has been increased by about 100 pages. It is a modern and complete guide to the principles and practice of preventive medicine, with which the humanitarian physician of the present day should thoroughly familiarize himself. The advances made in preventive medicine have been incorporated in it, and it is surprising the publisher can issue in so complete a form at so moderate a price.

THE PHYSICIAN'S HAND-BOOK FOR 1891. By Albert D. Elmer, M. D. G. P. Putnam's Sons, 27 West 23d St. New York, Publisher. Price, $1.50.

This ready reference and diary for the physician, has reached its 34th year of publication. The present edition has been thoroughly revised. It furnishes, in abbreviated form, a compendium of usual knowledge, and at the same time affords a convenient method of keeping a record of practice.

THE LOST MANUSCRIPT.

The Open Court Publishing Co., of Chicago, will publish immediately, in two handsomely bound and printed volumes, a new, authorized translation of Gustav Freytag's well-known novel, "The Lost Manuscript." This is regarded by critics as the most charming of the famous German writer's works.

SCRIBNER'S MAGAZINE FOR JANUARY:—

WENTWORTH VALLEY, BLUE MOUNTAINS, AUSTRALIA. *Frontispiece.* The engraving by F. A. Petit.

THE PIGMIES OF THE GREAT AFRICAN FOREST. By Henry M. Stanley. Illustrations by C. Broughton, Dan Beard, and Herbert Denman; engraving by Van Ness, E. H. Del'Orme, Jno. P. Davis, Schussler, and Jungling.

JAPONICA—Second Paper—Japanese People. By Sir Edwin Arnold. The illustrations by Robert Blum.

A TRUCE. By Mary Tappan Wright. (With an unpublished poem by Arthur Shelburne Hardy).

THE TWO GATES. By Margaret Vandegrift.

MODERN FIRE APPARATUS. By John R. Spears. Illustrated by M. J. Burns, Hughson Hawley, Gaspard Latoix, C. Broughton, and F. Day; engraving by Butler, Leblanc, Sam Davis, and M. J. Whaley.

TO CARMINE. By I. D.

JERRY—Part Third, Chapter IV.-V. (*Begun in June, 1890—to be continued*).

BOTTICELLI'S MADONNA IN THE LOUVRE. By Edith Wharton.

IMPRESSIONS OF AUSTRALIA. By Josiah Royce. Illustrations from photographs; engraved by E. H. Del'Orme, Witte, Van Ness.

THE ROTHENBURG FESTIVAL-PLAY. By E. H. Lockwood. Illustrations by Chester Loomis, J. D. Woodward, H. C. Edwards, and F. Day; engraving by Tietze, Pettit, Kruell, and E. H. Del' Orme.

COURT TENNIS. By James Dwight. With illustrations from photographs made at the Boston Athletic Club; drawn by Hughson Hawley and W. C. Fitler; engraving by George Del'Orme.

THREE CHARADES. By L. B. R. Briggs.

THE WATER DEVIL—A Marine Tale. By Frank R. Stockton. (*To be concluded in February.*)

THE ARCHITECT'S POINT OF VIEW. By William P. Longfellow.

THE POINT OF VIEW. The Philosophy of Flattery —Vanity in Authors—Artists as Critics.

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ANTIPYRIN AND LANOLIN. Pamphlets descriptive of these remedies, have been issued by Messrs. J. Movins & Son, 77 Murray St., New York, who will mail copies to physicians free on request.

Notes and News.

The Objects of the American Academy of Medicine.—

In a reprint of an article from the Journal of the American Medical Association, sent to the AGE, the objects of this Association are defined to be:

To secure through its Fellows resident in the different States, co-operation of the medical organizations of each State looking to legal enactments of all of the States to regulate the practice of medicine by granting, hereafter, licenses to practice only on examination, and regardless of the possession of diplomas issued by medical colleges. Such enactments have a two-fold effect: They make colleges, in effect, simply teaching bodies—which is their proper function—and they secure in future, for the protection of the people, physicians who are required to demonstrate to the constituted authorities of the State their qualification for the work in which they are seeking to engage, and they expose the pretensions of the unqualified.

To make preliminary mental training a requirement for matriculation in medical colleges. With this purpose the Association has outlined a curriculum of study which is advised as qualifying to begin the study of medicine.

A committee reports each year upon the laws of the different States to determine the qualifications, professional and otherwise, of candidates for license to practice medicine where such laws exist—including the standard adopted by those States, the method of ascertaining the qualifications of applicants, the mode of enforcing the laws, requirements, penalties for violations, and kindred subjects.

At the recent meeting of the Association, it was decided to dispense in future with the reading of medical papers, and confine itself to missionary work in the direction indicated above.

Certainly these objects should receive the earnest support of all those interested in higher medical education, both in the profession and out.

Immunity from Diphtheria.—

In the MEDICAL AGE, Dec. 25th, 1891, p. 567, was published a report emanating from the Hygienic Institute of Berlin, in which it was claimed that recent experiments by Drs. Behring and Kitasato, gave promise of the possible prevention of diphtheria and tetanus by means of transfusion of blood or serum. Subsequent to this, E. A. von Schweinitz, Ph. D. and Wm. Gray, M. D., of Washington, D. C., announced in the Philadelphia Medical News, experiments of a similar nature. They state that the disease-germ which they used is Klein's bacillus, and that this is probably identical with the Klebs-Löeffler bacillus; that they have succeeded in obtaining a chemical substance which renders Guinea-pigs treated with it insusceptible to diphtheria upon subsequent introduction of the strong virus into the system, while the control Guinea-pigs died in from twenty-four to forty-eight hours.

They further believe, that the experiments being made will demonstrate we have a substance which will serve to control or prevent diphtheria in man. That methods for the treatment of typhoid fever, tetanus, and other contagious diseases, can be worked out in a similar way, is undoubtedly true, though it may require a long series of experiments to demonstrate this conclusively.

Further confirmation of these facts will be awaited with interest by an expectant profession.

Importance of Examination of the Teeth in Epilepsy.—

Dr. Bakowski mentions, in the Prezeglad Lekarski, an instructive case of epilepsy occurring in a young Jewess. It had been going on for nine months, and latterly the fits had become more frequent, there being several every day. Bromide of potassium, quinine, arsenic, and assafœtida, had been given without any effect. Finally, although there was no complaint of toothache, it was decided to examine the mouth. Two teeth were found to be carious—the first upper molar on the right and the first lower molar on the left side. These were extracted, with the result that the fits entirely ceased, and did not return, though the patient was under observation for six months subsequently. Upon being closely questioned, the girl remembered that before the fits commenced she had had some unpleasant sensations in the affected teeth, but nothing that could be described as pain.—*The Lancet.*

A New Form of Package for Glycerin Suppositories.

A large demand exists for glycerin suppositories, inasmuch as these have been proven to form an efficient method of relieving constipation, and are invaluable to those who object to fluid medicine or pills. They are of especial worth in affording relief in hæmorrhoids.

Messrs. Parke, Davis & Co. inform the drug trade that they can now supply glycerin suppositories in packages of one-half dozen. These suppositories, which were first introduced by this house, were formerly put up in packages of one dozen only; it being found desirable to have smaller packages to fill prescriptions, and thus avoid opening the larger package and exposing the remaining suppositories to deterioration, this possible inconvenience has been removed by supplying them in packages of one-half dozen.

The Successor to Dr. Bartholow.—

The Committee of the Trustees of the Jefferson Medical College, appointed to select an Instructor to fill for the remainder of the college term the chair of Materia Medica, General Therapeutics and Hygiene, lately occupied by Professor Roberts Bartholow, on December 12th named Dr. Albert P. Brubaker for the position.

Dr. Brubaker is a graduate of Jefferson College, of the class of 1874. In 1879 he was appointed Demonstrator of Experimental Physiology. From 1885 to 1889 he was Demonstrator of Experimental Therapeutics. Since 1885 he has also been Professor of Physiology in the Pennsylvania College of Dental Surgery.—*Medical News.*

A New College and Hospital.—

The Brooklyn Post-Graduate College and Hospital has been incorporated with the following officers: President, Dr. George R. Fowler; Secretary, Dr. Reuben. These officers, with Drs. Glentworth, Butler, and

Charles Jewett, will form the Governing Council. The Board of Managers consists of Drs. West, Van Cott, Fuhs, Lennox, Browning, Price, Dayton, Pilcher, and Mr. Wensley. The institution will provide for instruction in all departments of medicine and surgery, and a dispensary will be established. The site of the building is not yet determined.—*Medical News.*

Women Triumphant·—

The students of the London School of Medicine for Women, had it all their own way at the recent London University M. B. examination. There were nine female candidates, and all passed—five in the first and four in the second division. Of the sixty-nine male candidates, fifty-two were successful.

Prize Awarded by the Medical Society of the County of New York.—

This Society has awarded a prize of $100 to Dr. David Cerna, of the University of Pennsylvania, for his essay upon the "Physiological Action of Hydrastis Canadensis." The essay is a very exhaustive and careful study of the subject of which it treats.

A New Journal Devoted to Koch's Treatment.—

From January 1st, 1891, a new journal is announced to appear under the title "Central Zeitung für das Koch'sche Heilverfahren." It is to be devoted, as the name implies, to anything pertaining to the cure of tuberculosis and other infective diseases.

Notice of Removal.

Dr. A. Hummel, formerly President of the University Medical Press Co., has removed his business office (from Chestnut and Sixteenth streets) to 612 Drexel building, Fifth and Chestnut streets, Philadelphia.

Charcot on Hypnotism as a Therapeutic Agent.—

Dr. Charcot, who has recently furnished a long series of experiments with hypnotism, gives as his opinion that not more than one person in 100,000 would be likely to be benefited by this mode of treatment.

Therapeutic Brevities.

Thiersch's Method of Skin-Grafting.—Dr. McBurney reports a number of cases of extensive ulcer quickly closed by this method. The ulcerated surface is freshened, hæmorrhage checked by pressure, and washed with a solution of common salt in sterilized water, six parts in one thousand. The grafts consist of thin slices removed by shaving parallel with the surface. They may, of course, be taken either from the patient or from another individual. Any broad knife may be used in cutting the grafts, but no instrument is so good as a broad razor with a vey delicate edge. With this instrument, shavings no thicker than a piece of note-paper, four or five inches long and an inch broad, may with a little practice be readily made. The surface from which grafts are to be taken should be thoroughly cleansed and shaved, and then wet with the salt solution. Taking the razor in the right hand, the operator wets it in the salt solution, and applying the edge at the most distant part of the stretched skin, with a rapid shaving motion toward himself, shaves off as thin and long and wide a shaving as he can. Four or five inches in length and an inch wide are about the dimensions of a first-rate graft. Some grafts may be as thin as tissue-paper, and others as thick at some parts as card-board. All will do well, but no graft will do well that is so thick as to have fat under its surface. The graft being piled up on the razor, a few drops of salt solution should be dropped on it, and the instrument be immediately carried to the edge of the surface to be grafted. With a probe, one end of the graft may be slid off the razor to the raw surface, and being held there, the razor may be slid from under it across the surface, so as to unfold the graft and deposit in its place.—*Medical Record.*

Rhus Toxicodendron.—This remedy, some years ago, I used for incontinence of urine in children, but not with satisfactory results. My experience of the drug is, however, that it is of great service in chronic rheumatism, especially that kind affecting a small portion of the body; likewise in sciatica and lumbago. One case will suffice to show the effects: I was called to see a lady aged 42 years. She said she had suffered from a pain in her shoulder and upper portion of her arm for three months; was unable to raise her arm more than a few inches. I gave her tincture of rhus toxicodendron, and on calling next morning found she had slept better

the previous night than for three months, and that the pain was almost gone. A few hours later the pains entirely disappeared, and had not returned when last seen, four months after the rhus had been administered. It is likewise useful in rheumatic gout, and lithemic tendencies which are apt to appear during the progress of other diseases; in the neuralgic pains accompanying a lingering case of typhoid; also the paralysis which often follows in the wake of typhoid. Scaly forms of skin disease often yield to this drug, especially those dependent more or less upon ingestion of improper food, which ought to be forbidden during the period of treatment. The tincture should be made from the fresh leaves gathered during the period of efflorescence, and selected from plants growing in the shade, or before the sun strikes them in the early morning. The active principle, toxicodendric acid, is very volatile, therefore the preparations made from the dried leaves is apt to be inert.—Dr. J. Lindsay Porteous in *Edinburgh Med. and Surg. Jour.*

Eucalyptus in Catarrh of the Respiratory Tract and Obstinate Cough in Children.—In acute cases, my usual custom is to administer it in connection with ammonium salts; in subacute cases a little paregoric may be advantageously added. In the obstinate irritative coughs following inflammatory affections which have apparently subsided, the fluid extract of eucalyptus is best given without other drug, in syrups of tolu and acacia, or in an emulsion of oil. The dose is about five drops, for a child of two years. The following are specimen formulæ:

℞ Ammonium carbonate, gr. viii–xvi;
Ammonium chloride, gr. xxii–xlviii;
Fluid extract of eucalyptus, f ʒ iss;
Syrup of acacia,
Syrup of tolu, ää ʒ ss;
Water, ad f ʒ ii.

M. Sig.—For a child two years of age with acute bronchial or laryngo-tracheal catarrh, one fluidrachm in milk or water every two, three, or four hours.

℞ Aromatic spt. of ammonia,
Camph. tinct. of opium, ää ʒ ii;
Fluid extract of eucalyptus, f ʒ iss;
Syrup of acacia,
Syrup of wild cherry, ää f ʒ ss;
Water, ad f ʒ ii.

M. Sig.—For a child with subacute bronchial catarrh, one fluidrachm in water every two, three, or four hours.

—S. Solis-Cohen, in *Med. News.*

The Tænicide Properties of the Cocoa-Nut.—Professor Parisi, of Athens, some time since called attention to the tænicide properties of the cocoa-nut when freely ingested. His attention was drawn to the subject from an accidental experience in his own case; it was while he was travelling in Abyssinia that one day he took a considerable quantity of the nut, sufficient to produce an attack of diarrhœa. After a while, much to his surprise, with one of these diarrhœal motions there came away a complete tænia, head and all, and quite dead. After his return home to Athens, he made some observations in this line of treatment, and reported an almost invariable success. In only one instance did he fail to secure the head. His method was to order the milk and pulp of one cocoa-nut to be taken in the morning, fasting, no purgation or cessation from business being required. In this country Dr. Allison has reported, in the MEDICAL AGE, a case where the use of male fern, oil of turpentine, and chloroform, had successively failed to effect a complete removal of the parasite, but in which the patient by chance partook of a cocoa-nut, and soon after was relieved of a dead tapeworm with its head. Since then he has had occasion to prescribe cocoa-nut in this trouble, and found it the pleasantest of all the tænicides and one that does not require the administration of a cathartic.—*N. Y. Med. Jour.*

A New Method for the Treatment of Injuries to the Shoulder.—Dr. Monks reports about twenty-five cases, including some in which rheumatism undoubtedly played a prominent part. In most of the cases the ordinary methods of treatment had been tried in vain. The result was a more or less perfect cure in about two-thirds of all cases tried, in a period of time varying from a few days to a few weeks. The most hopeful cases were those which were purely traumatic. The principle involved in the treatment was that the shoulder is more perfectly in a condition of actual rest when the arm is *supported at right angles to the trunk*, than when the elbow is kept at the side, because (1) the weight of the upper extremity is thus entirely taken off the shoulder; (2) the deltoid and other structures covering the joints are relaxed; (3) the circumflex nerve and other deeply seated structures are relieved from pressure. In applying this method of treatment, the whole weight of the upper extremity is taken upon a platform-shaped splint, which is supported by a firm band of webbing passing over the other shoulder. The cases for which this form of treatment is especially adapted are, those where the prominent symptoms are persistent pain and tenderness in the shoulder, or inability to

raise the elbow from the side.—*Boston Med. and Surg. Journal.*

Migraine in Hysteria.—In the last number of the Archives de Neurologie, Babinski calls attention to a very important fact in regard to migraine—viz., that there is a large class of patients who suffer from what one would be at first inclined to say was the classical migraine, but that in this particular class there is a background of hysteria very important to diagnose, because of the great difference which it makes in regard to both prognosis and treatment. Details are furnished of several cases of this kind—cases which, besides showing typical hysterical symptoms, such as hemianæsthesia, insensibility of pharynx, contraction of the visual fields etc., also suffered from attacks of migraine with the usual visual phenomena, indeed in no way differing from those occurring in non-hysterical patients. The great difference is in their curability, and this is effected by means of a course of baths and the administration of bromide of potassium. Under the influence of this treatment the other hysterical phenomena, as well as the migraine, all disappear. Whether such a class of cases exist in this country remains for future observation to determine. It is well to bear this possibility in mind.—*The Lancet.*

On the Cumulative Value of the Bin-iodide and the Bi-chloride of Mercury as Surgical Antiseptics.—The author states that bin-iodide of mercury is less toxic than the bi-chloride, but if used in proper concentration, is equally as potent as a germicide; it is a more stable chemical compound; it is more agreeable to the operator. Experiments made at the Hoagland Laboratory gave the following conclusions:

1. In equal concentration, the bin-iodide is slightly inferior to the bi-chloride in germicidal power. 2. For equal potency as a sterilizing agent, the bin-iodide should be used in greater concentration than the bi-chloride—say 1 to 1,800. 3. The difference in the efficacy of a 1-to-2,000 solution of bi-chloride, and a 1-to-1,000 solution bin-iodide, is insignificant. 4. The activity of a 1-to-2,000 solution of bin-iodide is materially greater than that of a 1-to-4,000 bi-chloride solution. Alcohol should be used before the sterilizing solution, for its hygroscopic action.—Dr. Jewett, in *N. Y. Med. Journal.*

Beef Tea a Starvation Diet.—Dr. E. B. Ward (American Lancet, November, 1890) vigorously condemns beef-tea as a delusion, and sums up in the following words:

Thousands of sick people have been starved to death on this diet, and I want to enter my solemn protest against it before it is everlastingly too late. What you want is the albumen and fibrin of the meat. . . . The moment you coagulate these ingredients by heat you render them practically indigestible. . . . Good milk is preferable always, but if you must give beef-tea, never boil it. Liebig says 120° F. is the highest temperature to which it should be subjected. It is not very inviting in its general aspect, but it holds in solution the ingredients that you want, and which are rendered useless for a weak digestion by boiling. Liebig's plan is to add a little hydrochloric acid. Good rich milk punch, however, is far preferable.

Gelsemium in Pneumonia.—Dr. J. Lindsay Porteus, in Edinburgh Medical and Surgical Journal, says: I have found wonderful benefit from the use of normal liquid gelsemium in a case of pneumonia. The condition of the patient was as follows: There were minute crepitations, pain in lungs, temperature 104 degrees, pulse 130, skin hot and dry. After the use of gelsemium, the skin became moist, temperature and pulse were reduced, and what appeared to be the commencement of an attack of pneumonia averted. If aconite be added, the results are even more satisfactory. The drug is powerful, and of course not always infallible. If it does not relieve within twenty-four hours it ought to be discontinued. It is of service also in the neuralgic pains of dysmenorrhœa.

Leucorrhœa and Blenorrhœa in Women.—Dr. Luaud, in Jour. de Méd. de Paris, employs:

Creolin, gtt. xxx.
Ext. fluid hydr. canad. fl. drachm ijss.

Sig. Two teaspoonsful in a pint of warm water to be used at one injection.

As an urethral injection he uses the following formula:

℞ Extr. fluid hydrast. canad., gtt. xxx.
Creolin. gtt.
Aquæ, fl. drachm vij.

Sig. Use pure as an urethral injection.

—*Archives of Gynæcology.*

Saw Palmetto for Sexual Debility.—Dr. F. S. Style's experience with *Serenoa serrulata* (November number, page 416) is the same

as mine. I have used it several times in impotence, combined with nux vomica, tincture cactus grandiflora, phosphoric acid, etc., according to each case. I used the saw palmetto on a big, strong-built man, with small testicles. He was about to get married, but having no erections, called at my office. After three months using of the palmetto in different combinations, his testicles were properly developed. He married, and his wife has borne one child (female) one year after marriage.—Dr. Herman Rietze, in *Med. World.*

Ready-made Linseed Poultices.—The use of a linseed poultice is so general, and at the same time attended with so many difficulties and inconveniences, that anyone who discovers a really effectual ready-made linseed poultice, capable of extemporaneous and effectual use, is in a small way a benefactor. The ready-made poultices now marketed are light, flexible, clean, and easily applied. Three minutes' soaking in hot water makes ready.

Prevention of Flea Bites.—In my travelling-bag I habitually carry a small bottle of carbolic acid, on account of the torment which a chance flea inflicts on me. If attacked, I take two or three pieces of waste paper, and upon each put a few drops of the strong acid, then roll them up and place in different places around me in bed. This effectually ends the annoyance. I think the pungent "disinfecting" acid is the most effectual.—*British Med. Journal.*

Minute Doses of Calomel are sedative to the stomach, liver and intestines, and favor the pouring out of the watery portions of the blood into the intestines. Tablet triturates, each containing gr. 1-20, prove useful in the derangement of the alimentary tract. One must be given every half hour until six or eight have been taken.—*Edinburgh Medical and Surgical Journal.*

The Atmospheric Tractor a Help in Labor.—The "Atmospheric Tractor," is a new, cheap, and what appears to be safe and helpful, instrument in labor cases after the head of the fœtus has become properly flexed and yet is delayed in birth. A full description of the "Tractor" and how to use it, is given in the Medical and Surgical Reporter of November 9th, 1890.

Medical Progress.

On the Recurrence of Cancer and Its Prevention.—In a lecture delivered by Herbert Snow, M.D., at the Cancer Hospital, London, reported in the Lancet, the author says:

The designation "recurrence" is but a misnomer—the phenomenon really consisting of a reappearance of malignant cells, nuclei, or nuclear particles, residual after seeming extirpation. Ordinarily the palpable tumor is but a part of the diseased area, being, when unencapsuled, surrounded by infected tissues, which may not evince any discernible pathological alteration. The great aim in the surgical treatment of malignant disease should be, complete extirpation of the whole primary deposit before any secondary infection has had time to ensue. The most essential point towards securing that early diagnosis, which alone would render such an object feasible, is recognition of the general and local conditions specially liable to result in cancerous disease.

Of these, protracted *mental distress* is the most important. In malignant affections of the breast and uterus (which constitute so large a proportion of the total cases), it commonly appears as the sole immediate antecedent. In all varieties it seems to predispose, although, when other localities are attacked, a mechanical exciting cause is, on careful inquiry, usually to be traced in addition. Primary cancer of lymph-glands (lympho-sarcoma) almost invariably escapes diagnosis until practical measures of extirpation are useless. Better results would, without doubt, be secured were the individuals likely to suffer from malignant disease, promptly recognized (in this, as in other instances) as thus predisposed. In the youthful, simple lymphoma is a common complaint; in the old it is rare, and very seldom seen without some obvious septic causation, such as diphtheria. In the middle-aged or elderly, lymph gland enlargement taking place without this or some similar causation history is, *per se*, most probably malignant; if, in addition, there is an account of injury, and of mental troubles, the probability will be greatly enhanced. In any such case, doubt should be promptly cleared up by exploratory incision before further glands in the chain become infected—a process which takes place with considerable rapidity. Again, early resort to a vaginal examination would often prove of the utmost advantage in women with uterine symptoms, long exposed to mental trouble,

or to some similar agent productive of debility and exhaustion, who might therefore with reason be regarded as predisposed to malignant disease. With such persons seeking advice for tumor formation in the mamma, no time should be lost in the harmless procedure of an exploratory incision under anæsthesia.

In the case of these breast tumors, the age of thirty-eight is a rough but useful practical guide. Any growth discovered long before that period of life is almost certainly non-malignant. At that date, and subsequently, there is strong *à priori* presumption in favor of malignancy, whether of connective tissue or of epitheloid origin. And even primarily non-malignant breast neoplasms are prone (after that limit of age) to develop cancerous phenomena. Although less conspicuous in other localities, the predisposing influence of age endows any tumor formation in persons past the period of youth with grave suspicion. In respect of the projected removal of a primary cancerous growth, each individual case requires careful consideration and adjustment of details. Thus the variety of neoplasm, its locality, its duration, and stage of apparent development, its proneness to infect certain tissues, and to be restrained by others, etc., need judicial estimation and due allowance. The special liability of the skin and subcutaneous tissue to receive contagion, to serve as vehicles for dissemination, and as media for future recurrence, are of eminent practical importance. On the other hand, dense fasciæ and non-vascular fibrous structures (such as cicatricial tissue) more or less inhibit cancer growth.

The following rules for the extirpation of breast scirrhus (as typical of infiltrating cancerous growths in general) are formulated; 1. The palpable tumor occupies but a portion of the tissues actually diseased; it is necessary, therefore, always to extirpate a wide margin of the seemingly healthy parts, apportioning the amount excised to the requirements of each individual case (its duration, rapidity of progress, situation, etc). 2. An instance is very rarely encountered in which infection of the near axillary lymph glands have not already taken place, although physical signs of the occurrence may be wholly wanting. The contents of the axilla should in every case therefore be removed, as a routine rule of practice, especially as the palliative benefits conferred by that measure (in the event of "recurrence") are ordinarily far greater than those derived from a simple excision of the mamma. 3. Unless the growth is very minute and recent, the whole parenchyma should be removed. 4. Whenever the skin is implicated, or the disease approaches the surface, a much larger portion of that structure should be excised than would otherwise be needful. 5. It is important to carry the incisions *vertically* down to the underlying fascia. If, subsequently to the first cuts through the skin, the parts are severed obliquely, infected spots are liable to escape. 6. The first incision should always be made the nearer of the two to the seat of disease (when this is a-central), and should accurately sever all the tissues most prone to infection by "contiguity." 7. Union by first intention is an object of but trivial consequence in comparison with that of complete eradication, and if the case appears to require it, the former aim should always be sacrificed to the latter. 8. Before the operation is terminated, it is essential to search carefully for any outlying axillary glands, portions of mammary parenchyma, or malignant nodules which may have escaped removal. In particular, the chain of minute lymph glands (hardly discernible unless enlarged by disease) in the fascia on the under surface of the muscles, requires attention, as also the wedge of breast tissue occasionally prolonged into the axilla over and around the edge of the pectoralis major. 9. The patient must subsequently be kept under periodic observation for the term of two years, and any "recurrent" nodule or other suspicious appearance promptly removed before this has had time to serve as a medium for further diffusion.

The Treatment of Dysentery by the Administration of Saturated Solution of Epsom Salts.—Dr. Leahy, of the Indian Medical Service, has advocated the treatment of acute dysentery by Epsom salts in pretty large doses; and he publishes in the Lancet his method of treatment:

Take a sufficient quantity of sulphate of magnesia to saturate seven fluid ounces of water, and to this saturated solution, add one ounce of dilute sulphuric acid. The dose is a table-spoonful every hour or two in a wine-glassful of water till it operates.

One hundred and three cases have been treated by this method with the greatest success. In the earlier stages of acute dysentery this saturated solution of Epsom salts acts like a charm; fever, if present, disappears; mucous and blood are wanting in the stools, which become copious, fæculent, and bilious; the tenesmus ceases; patient's anxiety diminishes; the skin acts well; and sleep follows the administration of the first few doses.

In other instances, a drachm of the saturated solution with ten drops of the dilute sulphuric acid, may be given every hour until the stools have become copious, fæculent, and free from blood and mucous. When the stools have become normal in color and appearance, and the patient only passes two or three in the twenty-four hours, an ordinary astringent mixture of acid with laudanum, or a pill containing opium, is all that is neccessary to complete the cure. It is, of course, imperative to diet the cases with great care.

The advantages of this treatment over that by large doses of ipecacuanha, may be summed up as follows: It has no depressant action on the system: (2) It neither produces nausea nor vomiting: (3) It quiets and soothes the patient: (4) Its physiological action on the mucous membrane of the intestines in relieving hyperæmia is sound, and by this means it probably prevents the formation of ulcers within the gut, places those which may have already formed in a condition most favorable for their healing, preventing the acute inflammatory process and engorgement of the mucous membrane leading to the death of more tissue, and thus bringing about a cure.

Painless Circumcision.—For the past fifteen years I have performed circumcision quite frequently for the relief of various nervous disturbances. Since the introduction of cocaine, I have used it almost exclusively in men, and frequently in children, by injecting beneath the integument in the prepuce (having previously placed a rubber band around the penis half an inch or more back of the corona to limit its effect to the prepuce).

The pain attending the introduction of the needle into the sensitive skin, has been a serious objection in men, and almost as bad in children, as the operation itself. Then I have had various postponements, and often complete abandonment of it, because I could not promise "that it would not hurt." Now I can promise an operation where a child would not even know it until it was performed.

I do not want my patient to see the operation, and in the case of a child I conceal the instruments. I then place the patient upon his back and lay a small pillow on his chest so that he cannot see over it. I then adjust the rubber band, take a freshly prepared thirty per cent. solution of cocaine, and inject with a small blunt-pointed syringe, a few drops into the preputial orifice, at the same time I hold the end of the prepuce with my left hand to prevent the escape of the fluid. I then press upon the fluid with my right hand to enable it to come in contact with the entire mucous membrane. I hold it for five or six minutes, when the mucous membrane is completely anæsthetized. I then introduce carefully my hypodermic needle through the preputial orifice, and penetrate the mucous membrane and inject a few drops of cocaine. I then move it to another part and repeat the injection. It necessarily requires caution to prevent puncturing the integument, which would cause pain. I operated upon a child six years old, very small, nervous, and excitable, while he was discussing with his mother the kind of toys he would get for Christmas. I also operated upon a boy fourteen years old that came from an adjacent town (using silk-gut ligature), he did not feel the slightest prick of the needle. He returned home the same evening and recovered without a bad symptom. It is always better to use a ligature that does not require to be removed.—G. W. Overall, M. D., in *N. Y. Med. Record.*

Apomorphine in Convulsions and Strychnine Poisoning.—Dr. W. J. Ransom reports in the Medical Record, the following case:

I was once called to see a man who had taken by mistake an overdose of fluid extract of nux vomica. He had taken the liquid from the bottle without measuring it, and did not know the exact amount. He immediately took an emetic dose of ipecac, and telephoned for me. I saw him about fifteen minutes after he had taken it, and the emetic had not taken effect. I was prepared for the emergency, and had chloroform, etc., with me, and also apomorphine in the form of hypodermic tablets, one-twelfth of a grain each. I immediately gave him a tablet hypodermatically, but had no more than removed the needle when he had a terrible convulsion. I administered chloroform, and in a short time the convulsion ceased. For a moment I feared that he was past help; his pulse was barely perceptible and the heart-sounds were feeble. In a few moments he rallied, vomited freely, and perspired profusely. He did not have another convulsion. I gave chloral and potassium bromide through the night, and the next day my patient was all right. At the time I thought that, aside from the emetic effect of the apomorphine, its general relaxing effect had combated the convulsive effect of the nux vomica.

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Original Articles.

ON URINARY GRAVEL AND CALCULI OF THE KIDNEY.

BY PROF. GERMAIN SEE.

In order that such concretions may be formed, there must be precipitation of certain constituent parts of the urine in the ducts or pelvis of the kidney. It is not enough that there shall be simply increase of the solid matters; uric acid, even in very small proportion, is precipitated as soon as the acidity of the urine augments. The phosphates cannot remain in solution if the urine becomes alkaline. Oxalate of lime is precipitated when once the free acid is neutralized. It is from this point of view that we must form our estimate of the old theory of "uric phosphates, and oxalic diathesis." Pathologists have long affirmed a connection between excess of uric and oxalic acids and incomplete tissue-metabolism, while phosphatic excess has been attributed to a disturbance in the functions of the nervous system; but no one has ever demonstrated the existence of any such nexus. Furbringer, who has just published an interesting work on this subject, adopts the views of Dana, who concludes, as a result of his experiments, that certain forms of neurasthenia and other neuroses, as well as gout and rheumatism, may be occasionally accompanied by an augmentation of these constituent parts of the urine; but, at the same time, he discards absolutely the idea of a lithæmic diathesis. Virchow has also demonstrated the falsity of the current theory which would establish a relation between gout and the presence of uric concretions in the kidney and bladder.

Between gout and the presence of calculi, there is but a fortuitous and quite rare coincidence. I have long held to the opinion of Dana, Furbringer, and Virchow, as to the autonomy of gravel and its independence of gout.

Uric acid and its salts form the greater part (80 per cent.) of renal concretions. Then come in order of frequency, oxalate of lime calculi; those formed exclusively of phosphates are rare; calculi, of which the outside alone is phosphatic, the centre being uratic or oxalic, are more frequent.

Our notions respecting the origin of uratic concretions are still not very precise. We can affirm, however, that variations of the temperature, or increase in the concentration of the urine, play but a secondary part. The proximate cause of the precipitation of uric acid is an abnormal acidity of the urine sufficient to decompose the alkaline urates.

In recent and still warm urine, in a great many subjects, we find crystals of uric acid (urinary sand) when these individuals are quite free from proclivities to calculus; this, then, leads us to ask ourselves, with reference to the subject of uric acid lithiasis, the two following questions:

(1.) What is the cause of this abnormal acidity of the urine, leading to the precipitation of uric acid from its combinations?

(2.) What are the conditions necessary in order that this uric acid may form calculi?

1. Alimentary Agents.—The presence of uratic sediments in the gouty kidney formerly led to the admission of a relation of causation between gout and uric acid gravel; pathologists affirmed a dependence of the two conditions on high living, and on excess of animal food. The observations which can be cited in favor of this view are not sufficient to demonstrate the necessary correlation of gout and gravel, and their dependence on dietetic errors. Virchow rejects it absolutely from the data of pathological anatomy; moreover, the geographical distribution of renal gravel does not at all favor the alimentary theory, and the essential unity of the two morbid conditions mentioned. In all cases, we are obliged to admit as a necessary factor, a predisposition, individual or hereditary, to renal lithiasis.

In fact, there are a great number of individuals who, despite their mode of life, and notwithstanding gout, remain free from gravel. Rosenstein, who owns to having seen the two diatheses but rarely coincident, none the less considers the two orders of phenomena as the expression of the same trouble on the organic exchanges.

Furbringer has found lately at the autopsy of a leukæmic patient, the pelvis of the kidney full of uratic calculi.

Although leukæmia favors the production of sediments of uric acid, this disease can not be regarded as sufficient cause of the formation of voluminous calculi.

Nor can we any longer attach much importance to the too free use of amylaceous articles of diet, as causing an exaggerated production of lactic acid. We have to make little account of excess in the use of milk, wine and beer; all these dietetic errors act at the most as auxiliary circumstances.

The quality of the drinking water has also little causal agency in this complaint. The presence of lime salts in excess, by diminishing the acidity of the urine, would rather oppose the precipitation of uric acid, and these salts are in too small quantity in potable waters to give rise to concretions of phosphate of lime.

2. Formation of Calculi.—As regards our second question (*vide supra*), we know that renal calculi are crystallized masses which obey the general laws of crystallization. But what is the cause of the agglomeration of these crystals? Assmuth, Ultzmann, and Cantani, accuse certain chance, crystalline, irregular, acute forms, of provoking the precipitation in mass. Nevertheless, it is difficult to prove any such causal connection.

You will often find in the centre of the calculus a foreign body, epithelial debris, a flake of mucous membrane, the ova of the distoma. But Cohnheim, rightly remarks that we cannot find in these foreign bodies a sufficient cause for the production of calculi, as all corpuscular bodies are swept along by the circulating urine, and traverse the renal pelvis. On the other hand, it is remarkable to see the calculi often wanting when the urine contains abundant sediment, and even when there is stagnation of urine.

However this may be, the search for an organic origin of the concretion has led to interesting results. Ebstein has observed in thin sections of calculi, that the uric acid is held together by the meshes of special stroma of albuminoid nature; the presence of this substance not only in the calculi but in the urinary sand, suffices to distinguish them from simple uratic sediment. Posner has confirmed this discovery, and remarks that by the presence of an organic framework, the formation of calculi obeys the laws of the development of the skeleton. After dissolving the mineral salts, there remains a soft mass of origin truly epithelial, capable of being colored by iodine and by carmine. You will find this also in the "microliths" of Posner; they are crystals of abnormal form by reason of their combination with an organic substance; their presence in a urinary sediment is the index of a "local formation of calculi."

Oxalic acid, according to the experiments of Schultzen and Furbringer, is one of the elements of normal urine. It is precipitated either with uric acid or in neutral or alkaline urine. Hence, oxalate of lime is met in the centre, or at the periphery of calculi. Oxaluria is without necessary relations with the production of oxalic calculi. The phosphates of lime and magnesia are precipitated when the acidity of the urine diminishes. This condition is fulfilled in the ammoniacal fermentation of urea. Hence, the phosphatic calculi are calculi of the bladder, or they may form the superficial coating of renal stones developed elsewhere. They are very rare in the kidney.

As for calculi of cystin, it is worthy of mention that Ebstein, who has collected sixty-three cases, has not been able to find any trace of a stroma in them.

3. Accessory Causes.—Renal lithiasis is met with in all ages of life, even (though rarely) during the fœtal period. Childhood, early manhood, and old age, are more particularly liable. Möller, in 277 cases, found one at the age of one year, and one at the age of 80 years.

We must also mention the uric infarcts of the newly born. These are met with about the end of the second week, sometimes a little later. Often a bilirubic or pigmentary infarct is combined with a uric infarct.

Pathologists are also familiar with calcareous deposits in the kidney which sometimes complicate nephritis. Litten has seen them produced after tying the renal artery; he has shown that these calcareous salts may incrust the epithelium of the kidney from the capsule to the papillæ; at the same time, the cells undergo certain modifications, and notably the necrosis of coagulation.

It has recently been found possible to reproduce, experimentally, renal lithiasis. Ebstein and Nikolaier, in causing dogs and rabbits to eat *oxamid*, have found in the kidneys of the animals beautiful concretions of this substance with an albuminoid framework.

Renal calculi are roundish ellipsoids, resembling an almond, a bean; much more rarely, they resemble a branch of coral, and show the imprints of moulding by the pelvis and calyces. They are seldom larger than a kidney bean; very rarely weigh as much as, or more than, three ounces; their number is very variable, being ordinarily inferior to one hundred.

Calculi of uric acid and urates are hard; their surface is smooth; they are of orange or brown color, sometimes even dark, and sometimes present clear strata, alternating with others that are deep-colored. Their outside coating is sometimes formed of oxalate of lime; it is very rare that this salt forms the nucleus of the calculus. We often find alternate layers of uric acid and of oxalate.

Calculi of oxalate are the hardest of all; they are rough, mammillated, mulberry-like, and often the coloring matter of the blood gives them a very dark color; their fracture is amorphous.

Phosphatic calculi have a very clear color, and are often almost white. They are less hard; their surface is smooth, or only slightly rugous. Concretions of ammoniaco-magnesian phosphate have a coarsely crystalline fracture; they contain generally phosphate of lime, urate of ammonia, and, according to the researches of Furbringer, oxalate of lime. Their surface is always rugous. The earthy phosphates are ordinarily precipitated as a result of an ammoniacal fermentation, and constitute the cortex of calculi; nevertheless, the triple phosphate may also form the nucleus, and if the urine becomes acid, the superficial strata will be formed of uric and oxalic acids.

Renal Lesions.—The presence of concretions often provokes in the kidney a calculous pyelitis, which is the reaction of the organism to the irritation produced by the foreign body. The intensity of the inflammation is variable, and it may go on even to suppuration, or the formation of abscess. Oxalic calculi, which are hard and irregular, are the most to be feared. Nevertheless we often see concretions which are smooth produce intense inflammation. Others bearing numerous asperities, are sometimes very well tolerated. According to what we have said of the ammoniacal fermentation and of phosphatic calculi, it is plain that the pyelitis may be the initial phenomenon, and the formation of calculi but secondary.

An important complication of calculous pyelitis is the obstruction of the ureter by one or more concretions. The consequence is the retention of urine and of inflammatory products, pus, mucous, blood, in the pelvis. The latter dilates, and the next stage is that of hydro-nephrosis or purulent nephritis. In all cases, the urine by stagnation undergoes the ammoniacal fermentation. Lastly, calculous pyelitis is quite often complicated with diffuse nephritis without suppuration.

Renal lithiasis is sometimes discovered by accident (as it were) at the autopsy; it has run its course without causing the least symptom. At other times, the signs which it provokes suggest a disease of the stomach, of the bladder, etc., which are absolutely healthy.

Prodromes.—But in the majority of cases, the symptoms of the disease are clear, and enable us to make an early diagnosis. These are periodical attacks of hæmaturia, pain in the region of the kidney with irradiations along the ureter, lastly and especially, the presence of gravel in the urine while it is still fresh and warm.

Stationary Period.—Later, we see supervene paroxysms of nephritic colic, and more rarely the permanent pains of pyelitis. We shall say nothing of more rare accidents; suppurative nephritis, pyelo-nephritis, hydro-nephrosis, urinary abscesses, which follow the obstruction or perforation of the ureter.

Nephritic Colic.—Pain exists in the majority of cases of renal lithiasis. There is ordinarily a sensation of tension, of weight in the lumbar region; movements of extension of the vertebral column augment the pain, hence some patients bend the body a little forward. These pains have for their cause the direct excitation of the nerve endings by the concretions.

Nephritic colic is the really pathognomonic symptom. It indicates almost always the passage of a renal calculus in the ureter. Nevertheless, in some cases, which are very rare, the passage of blood clots, of fragments of tumor, of parasites, or even, it may be, an idiopathic spasm of the ureter, may give rise to the same symptomatology. The attack of colic begins suddenly or insidiously, after severe fatigue, or even during the most calm sleep. The pains are intense, and proceed less from the irritation of the mucosa than from the forced dilatation and from the spasm of the ureter. Their maximum point corresponds nearly to the middle of this duct; they radiate thence to the bladder, the external orifice of the urethra, and the corresponding testicle. There is often, at the same time, or even before, vomiting, and this may cause the affection to be confounded with cramps of the stomach, hepatic or intestinal colic.

The duration of the paroxysm is reckoned ordinarily by hours, rarely by days; there are alternatives of remission and exacerbation. During these the face is pale, the pulse small and rapid, the patient writhes in agony, the body is covered with perspiration. In the infant, convulsions often supervene. There exists ordinarily a strong desire to urinate, but the patient voids but a small quantity, sometimes only a few drops of urine slightly bloody.

If the ureter is completely obstructed, and the other kidney remains healthy, the urine will be clear and limpid.

If the two ureters are obstructed, or if one of the kidneys no longer does its work at the moment when the obstruction in the ureter on the other side takes place, it is generally affirmed that death from uræmia is certain. Nevertheless, there have been cases of complete anuria lasting more than a week before causing death. In other circumstances, death supervenes from the obstruction of one ureter, the other kidney being perfectly normal. We have to suppose, in this case, a reflex action arresting the function of the kidney. The starting-point of the irritation is in the mucous membrane of the ureter, where the calculus is engaged. Perhaps, we may compare what takes place here with the contraction of the vessels of the kidney which is produced when we excite the end of the cut sciatic nerve, or with the anuria by vascular spasm, which is sometimes observed in the hysterical.

Senger makes the remark, that the antiseptics employed may provoke in the unhealthy kidney a toxic nephritis, and thus arrest its functions. The antiseptic substances, which are always more or less toxic, are then no longer eliminated, and we have the symptoms of uræmia a little modified. Nephritic colic ordinarily terminates suddenly, and a sense of inexpressible comfort succeeds the final paroxysm of the pains. Sometimes the return to health is very gradual, and this may be due to fragmentation of the calculus in the interior of the ureter and its removal piecemeal.

The subsequent attacks are often less painful, due to dilatation of the ureter and and diminution of its sensibility. We observe, oftener than one would think, abortive attacks of renal colic, whose symptoms are more or less marked. It is possible that there are a multitude of intermediate degrees between the true paroxysms and the abortive forms, dependent chiefly on the form and dimensions of the calculi.

The stones which have traversed the ureter are arrested after a variable period in the bladder, and may not be found in the urine till several days after the attack.

The examination of the urine may explain the nature of the calculi. An excess of uric acid, of oxalate of lime, the presence of blood globules in the urine which has just been voided, added to the rational signs, render very probable the existence of renal lithiasis. Rosenberg proposes a new test for uric acid. The urine is mixed with an equal volume of phosphate of tungstin in solution; if then there is added a drop of liquor potassæ or some other alkaline solution—a blue color is obtained which is due exclu-

sively to uric acid. Nevertheless, the reducing bodies which may be found in the urine, as well as certain medicines, are said to give the same reaction. Moreover, this premonitory symptom, this excess of salts in the urine, may be deceptive, and there may not not be any calculus.

The diagnosis of pyelitis, at the onset is made by means of the microscope; but the leucocytes may disappear among the red globules; later on, an albuminuria is often observed with a quite irregular course.

We must not forget the possibility of nephritic colic without lithiasis; moreover, it will not do to be led into error by the gastric or vesical symptoms which often accompany the colic.

Simple pyelitis, tuberculosis, cancer, the parasites of the kidney, are sometimes difficult to distinguish from renal lithiasis; likewise suppuration of the kidney, pyelitis, perinephritic phlegmon, are of delicate diagnosis. Abscess of the kidney and hydro-nephrosis, sequels of lithiasis, are often difficult to differentiate from tumors of other organs, especially those of the liver and the gall bladder. It has been said that the tumors of the kidney do not follow the respiratory movements; in reality this is not true; the movements of the diaphragm are communicated by the intermediation of the liver to the right kidney, and are still further favored by the adhesions which always form in cases of hydro-nephrosis. The most certain sign seems to be the presence of the colon in front of the renal tumor, its absence in the case of the hepatic tumor. One may aid the diagnosis by insufflating air into the large intestine. Rosenbach advises to inflate the stomach; the liver then approaches the abdominal wall, while the renal tumor becomes less sensible. Tumors of the spleen are also very difficult to distinguish from those of the left kidney.

It is very important, from a surgical point of view, to know whether one of the kidneys is sound. The fact is certain, when during the nephritic colic, the urine, after being purulent, becomes limpid. When the case is otherwise, we cannot affirm disease of both kidneys, for the ureter on the diseased side may be incompletely obstructed. Of late, it has been proposed to catheterize the ureter with the view of determining the state of both kidneys, but the idea is absurd.

In the female, it has been advised to dilate the ureter; to illuminate the interior of the bladder by means of the electric light in order to find the orifice of the ureter. According to Pawlick, these precautions would also be useless, for the urethra, the trigone, and the orifice of the ureter, may be felt through the anterior vaginal wall, and this would enable one to guide directly the instrument; but the operation would be both dangerous and useless. In the male, it has been proposed to obstruct temporarily one ureter in order to ascertain the state of the other kidney.

Other authorities have advised the establishment of a renal fistula on the side supposed to be diseased, before deciding on extirpation. This exploratory nephrotomy is the worst kind of treatment.

Let me say, in concluding, that even when the urine of one kidney is absolutely clear, this fact does not exclude the possibility of a diseased state of this organ, an atrophy for example, and the patient may die of uræmia after the extirpation of the other kidney, which has been found to be the seat of calculi.

THE RATIONAL CURE OF CONSUMPTION.

WM. THORNTON PARKER, M. D., M. M. S. S.

Some recent articles in our medical and other journals concerning the treatment of consumption, have presented theories concerning the nature of this very prevalent disease, and statements concerning its cure, which cannot receive the universal approval of the medical profession. It seems to me that when certain ideas have been advanced which may be capable of increasing the anxiety and expense of devoted friends of invalids, only to meet with discouraging failure, some word of warning is justifiable to offset if possible the harm which might so easily result. The consumptive is peculiarly hopeful, and in too many instances more than ready to grasp at uncertain straws or follow blindly a will o' the wisp in search of the health he, and those he loves best, are so anxious for him to attain.

This is demonstrated to a most painful

degree in the present rush to Berlin of patients and doctors, who hope to obtain some benefit from Kock's anti-tubercular fluid. Only exceptionally can these pilgrims derive any benefit from the hard struggle and heavy expense always attending the undertaking. Hotel charges, and the extravagant professional fees demanded for this uncertain remedy, are quite enough to appall even the wealthiest of the seekers; but when we consider the dreary winter of northern Germany and the wearisome journey in return, from which even the strongest shrink, we cannot fail to wonder at the extraordinary confidence of so many people in this most shadowy hope for a cure in which even the originator does not seem to be over sanguine.

I will not attempt to prove or disprove the theory of contagion in phthisis. It is beyond a peradventure undesirable for those who do not possess a rugged constitution, and whose habits or inclinations keep them much indoors, to live in houses where one or more patients with confirmed consumption are domiciled. And yet there are large, sunny, well-ventilated houses, common enough perhaps in cities and towns, and in the country, where such a condition would not be considered hazardous. I believe in the contagiousness of phthisis only under exceptional conditions.

The science of medicine depends upon certain laws, and its cures are not arrived at by the subtle mysteries of physic, but by following certain actions which must be able to undergo the bright strong light of truth and common sense. Because the post-mortem conditions of one dead from phthisis present numberless bacilli tuberculosis, or because we find in the sputa of patients more or less ill with consumption, multitudes of this same bacilli, or because we can induce in rabbits or Guinea-pigs disease by inoculation, it is not proved that phthisis is caused by the reception of bacilli into the systems of people hitherto considered well.

There are very many able men in the medical profession, who do not believe in the theories advanced by Koch, although a majority of the profession are disposed to recognize in him extraordinary ability and brilliant scientific attainments. *The bacillus of phthisis is, without doubt, a product developed after the disease has developed, and is not the cause, unless in cases exceptionally rare.*

Dr. Shrady, of New York, in a recent editorial in the Medical Record, states concerning the inoculation of Koch:

Of it we know at least this, that it is a germicide, and that its action depends upon its destroying the vitality or power of growth of the tubercle bacilli. If this is the case, it is a remedy that must have various limitations to its usefulness. No agent which simply destroys the tubercle bacilli can seriously modify the phthisical process.

Nutrition is the thing needed to offset the consumption; we must seek to nourish and build up the system, and to succeed in this is to meet the case. We shall refer to this more fully in conclusion.

To inoculate sick and weakly consumptives with the poisonous products of tubercular disease as a means of cure, must seem to the thoughtful a very extravagant and absurd theory, if not one which should receive prompt condemnation. By recent advice, it would appear, moreover, that Virchow, the greatest of living pathologists, has condemned the use of Koch's anti-tuburcular "lymph," as dangerous to life and not conducive to cure. It would seem equally absurd to attempt to cure the disease by daily exposure, for longer or shorter periods, to air heated beyond a normal temperature. If phthisis were of the nature of cancer, or if we could part with great quantities of lung tissue, as we can sometimes with legs or arms, and if we could by such dissection obliterate only diseased tissue, and retain only that which is normal and healthy, then a great gain could be hoped for in treatment which does not change the surroundings, or the habits of our patients.

Consumption is, generally speaking, a preventable disease, and, without doubt, to be attributed in most cases to neglect of the laws of hygiene. Its origin is to be sought for in weakened constitutions; in homes where sanitary conditions are more or less wanting; in habits which prevent proper expansion of the chest, and where air more or less vitiated is breathed, instead of pure air containing the ingredients necessary for health and life. It depends largely upon improper food lacking in essential nutrients,

improper clothing, unhealthy homes, lack of needed sunlight, and poisoning by damp and musty atmosphere unfit for healthy people to breathe. It is found in those whose habits are sedentary, and where exposure to raw and chilly winds takes place; in bodies whose circulation is not strong enough to react after exposure. Sanitary science has diminished very largely, within the past twenty-five years, the mortality from what used to be "the terrible scourge of consumption." We find consumption in towns where indifference exists as to wholesome water and air supply, and where noxious odors are continually tolerated, and where the sanitary laws receive only the least attention possible to prevent the outraged citizens from demanding the removal of some conservative and incompetent board of health. Physiology teaches, by indisputable evidence, that the proper aëration of the blood is of paramount importance; that the breathing of air rendered impure from any cause is not only hurtful, but often dangerous; and that the highest degree of health is only possible when to the other conditions is added that of a proper supply of pure air.

Statistical inquiries on mortality prove beyond a doubt that of the causes of death which are usually in action, impurity of the air is the most important. We are brought face to face with this fact in considering the causes of consumption. General feebleness and want of vigor, and loss of muscular strength and weakness of the heart, have their origin in an impure air supply. A full expansion of the chest is prevented, a stooping posture of the body is induced, and the force of the circulation impaired; all these conditions favoring blood stagnation in the higher portions of the lungs, and an abnormal condition of the blood-vessels; impurity of the blood and constitutional feebleness furnish conditions which are most favorable to the development of consumption. We can readily understand how potent is impure air in establishing this disease, and we can also understand how frequently patients recover when sent to resorts where they can continually derive benefits of a pure air supply. If we recognize the importance of pure air in the prevention and cure of consumption, we must not be led into error by accepting promises of recovery for our patients by the treatment of artificial atmosphere. To place a patient in a cabinet or large room, or to furnish him with a glass tube by which he may receive from a cylinder a compound supposed to contain more or less oxygen, may or may not be beneficial to a certain extent. We have no right to make him believe that he is deriving special benefit from such treatment as a means of ultimate cure. Chemical science cannot manufacture an atmosphere in any sense equal to what is required in accomplishing a cure; and even if it could, our patients must leave the rooms containing it, and return through chilly, damp streets, to the conditions previously obtaining in their homes.

If we advise our patients rationally, we must begin with the home, outside and indoors; with the clothing—plenty of good thick flannels are needed in our changeable American climate for women and children, as well as for men; with easily assimilated, highly digestible, and wholesome food; with exercise, not indoors with some complicated system of gymnastics, no matter how theoretically perfect, but in the fresh air; it is out of doors that chest expansion has its greatest value. We must give a perfect system of hygienic rules; and these rules must not only be acquiesced in, but *obeyed*. I believe that Americans do not need to be sent abroad to seek for a cure for consumption. I have seen the ill effects of the Italian and southern France climates too often to withhold my protest against a sojourn in those regions for consumptives. Ventnor, Isle of Wight, England, is by far the best sanitarium in Europe for the largest number of consumptives. East of the Mississippi River, the Adirondacks must for many years to come remain unequalled for a residence, either in summer or winter, for our invalids with diseased lungs. Although I may be wrong in the statement, I have little faith in health resorts south of New York for consumptive patients, unless I except the excellent hotels of Atlantic City, or that delightful home, the Hygeia of Old Point Comfort. If we desire to give our patients the best opportunity for the recovery of health, the climate cure stands first on the list. New Mexico, eastern and southeastern Colorado, the Texan

Pan-handle, these are first and foremost. It is not reasonable for physicians to recommend localities they have not visited and carefully investigated. A trip from Boston to Los Angeles and back again does not afford sufficient experience to faithfully advise invalids, but it is worth more, all things being equal, than any advice from one who has done little travelling in any direction, and who depends upon drugs and chemicals to cure his patients. We recognize the necessity of experience in the specialist for diseases of the eyes, or in the surgeon—but why not in the climatologist? Can any specialty be of greater importance? Travel, and residence at health resorts, are absolutely necessary. Learn the peculiarities of constitution and temperament in our invalids, and know the conditions existing at the places to which we decide to send them. No book can give us the knowledge of the first any more than of the second.

In sending patients to health resorts, we have first to inquire as to the means; next we must be able to secure for them good wholesome food, plenty of eggs, good beef, good bread, and good milk; also it is highly important to provide horseback riding, driving, and walking, in the open air. The object most desirable is to expand the lungs, not for one or two hours daily, but at all times, and to fill them with life-giving normal air. This is the secret of the many cures in the sections I have named. The lungs are expanded, the diseased tissues separated and brought into contact contiuously with a healing, purifying atmosphere. The appetite is increased, the circulation is improved, and nourishment of the whole system is made continuous. The cures I have witnessed in Northern Texas, and especially in New Mexico and Colorado, have been simply marvellous, and the reason is to be found in out-of-door life in the pure, dry air, lung expansion, and activity with atmospheric nourishment. The "home-cure," so called, is but a flimsy imitation of the "climate cure."

Medicines are, generally speaking, injurious in the treatment of consumption—the less the better; now and then a tonic—very frequently a stimulant—constantly restoratives or nutrients, some thoroughly good preparation of beef extract. The care of the stomach is of the first importance; washing it out with hot water before each meal; eggs, boiled, poached, or fried, and plenty of them. Hygiene of the skin, the daily sponge bath, inunctions of sweet oil, and the Swedish method of chest expansion morning and evening—all these little details make up the grand result of cure. The cost is undoubtedly heavy; but the prize is often life. To stay at home in the East and have the frequent call of the doctor, is a poor makeshift towards rational treatment. What can we do? At most, to encourage, hold out false hope, possibly to benefit, or to make dying easier; but not to cure. If it be banishment to live in New Mexico or Colorado, certainly *that* is better than death at home in the Eastern or Middle States. A useful occupation, and the pursuit of out-of-door pleasures, either for man or woman, is better than the imprisoned life in an Eastern home useless to all, and oftentimes a care and expense to those who love us best. The Western health section is large enough to hold all the consumptives the East contains, and to cure hundreds who are to-day treading the downward path of despair. It is not right to beguile them with the inoculations of Koch, the hot air of this one, the patent vapors of that one, or the highly vaunted tonic and injection treatment of others.

For home treatment we must provide nutrients and an abundance of out of door exercise; and these are the important essentials whether in Massachusetts or New Mexico. The most difficult problem is to secure the required nutriment. Messrs. Parke, Davis & Co., have placed upon the market the valuable preparations known as the Mosquera's food products, of "Beef Meal" and "Beef Cacao"—concentrated, predigested, assimilable, palatable, and also exceptionally convenient for invalids. We have in these preparations, an exceptionally valuable nutrient, and one which I am daily recommending in practice with the most gratifying results.

The question of replacing the waste of tissue where normal nutrition is inefficient by means of concentrated or predigested foods, is one that has always presented many difficulties, there being very few prepara-

tions, if any, that meet all the requirements of the medical profession.

The ordinary process of preparing meat extracts involves a simple extraction of the meat with either warm or cold water. This extract contains none of the nourishing, flesh-forming albuminous substances. The meat juices are merely cold extractions of the meat. They possess very little nutritive value.

Powdered meats, as heretofore known, are nothing more than the residue left after drying the meat. They are liable to become rancid. They are lacking in the organic salts peculiar to meats, which salts are essential to the digestive process. Powdered beef, moreover, requires as much effort to digest it as does ordinary beef, and can not therefore be regarded as an adequate food for patients with derangement or weakness of the digestive organs.

Another group of meat preparations embraces the meat peptones, the taste of which are more or less bitter and objectionable to the palate, so that patients either absolutely refuse them, or take them with the greatest repugnance. Besides, their price is so high that the physician is often obliged to abstain from prescribing them.

All the difficulties characterizing the foods mentioned have been overcome by the new food products of the Mosquera-Julia Food Company.

Mosquera's "Beef-Meal" contains all the inorganic salts and stimulating principles of the extracts of meat, and, in addition, the nutritive principles which the extracts lack; all the albumen of meat juices without their weakness; all the extracts of powdered meats without their rancidity or insolubility; all the peptone of the peptonized meats without their bitterness.

It is a perfectly pure predigested meat, containing all the nutritious constituents of lean beef, half of which are in a soluble form ready for assimilation; the other half easily digestible by the gastric and pancreatic juices. The entire preparation is composed of nutritive matter, containing about 40 per cent. of soluble peptone and albumose.

It represents in actual nutritive value at least six times its weight of lean beef. It is perfectly palatable and will be tolerated with ease by the most delicate stomachs. It admits of being administered in a variety of forms, thus avoiding monotony in the food.

It may be given in any thick soup, seasoned to suit the taste of the patient, with salt, pepper, celery, or onions, or mixed with biscuit powder, oat-meal, porridge and milk and sugar. Again, it may be mixed with chocolate, which makes a delicious beverage, or given in the form of a sandwich.

Mosquera's "Beef Cacao" consists of equal parts of beef-meal, sugar, and a superior article of Dutch cacao. It does not require cooking, but may be mixed with warm milk exactly like ordinary chocolate, and so completely is the taste of the beef disguised that it can not be detected. Requiring, therefore, no previous preparation, it is most conveniently administered.

From the foregoing, we can readily see what a really valuable nutrient we have in these excellent preparations, and intelligent use of them cannot fail to derive great benefit. Invalids on the journey westward should be provided with these food products, and arrangements should be made to receive supplies regularly.

It may be considered very unwise to remove an invalid from home at all, and especially so when there is no reason to doubt that consumption has already fully developed itself. It may seem not only cruel to the patient, unfair to tax the anxieties and the resources of friends in making the change; but it is now an accepted fact that many who could not bear exposure to our severe winters and cold springs of the North, "and would soon find their malady forced into a fatal activity by the *ennui* of a protracted restriction in an artificial atmosphere, are able, not merely to live, but to enjoy life in some well-selected health resort." [Morland.]

For the invalid going either to Colorado or New Mexico, one word of caution is necessary, and that is: Lessen the dangers of hæmorrhages by approaching elevated regions gradually. Many lives are undoubtedly sacrificed by this hasty rush from New York to Denver or Santa Fé. We must

guard our patients by properly estimating the importance of increased altitude as a possible source of disease. We can promise them bright sunshine, and lots of it; pure air, reasonably good accomodations, and an abundance of healthy out-of-door life; and and in such places as Las Vegas and other towns of New Mexico and Colorado, delightful society. Nowhere can one find more sympathy and kinder appreciation, and the hope held out is seldom delusive, unless it is beyond doubt too late to go. A patient in the East considered hopeless, often entirely recovers in the West. Hope is the sustaining word, and recovery is so common that it is right we should give our patients that which can alone save them—the climate cure.

But whatever is decided, let the physician consider that his responsibilities are great, and that he owes it to his patient to give him a chance for his life, which no end of medicines—inoculations, cabinet cures, and hot-air baths—can ever hope to accomplish. Good nutritious and easily assimilated food, pure dry air, abundant sunshine, and out-of-door exercise, are the four requisites in attempting to cure consumption, and nothing ever can, or ever will, take the place of these blessings which God has bestowed upon us abundantly in our Western land.

January 15th, 1891.

NEW POINTS IN THE TREATMENT OF TYPHOID FEVER.*

BY DR. DUJARDIN-BEAUMETZ.

At our last meeting, I spoke to you of the new treatment of tuberculosis; I will speak to-day of typhoid fever, that disease which after pulmonary consumption is most frequently observed. Here again considerable progress has been made, which I will describe to you. I will call your attention more particularly to the antiseptic treatment of typhoid fever and to the employment of cold baths, and finally to those prophylactic measures which we use to diminish the spread of typhoid fever.

Although the recognition of the bacillus typhosus, or the bacillus of Eberth, does not yet give us a complete explanation of the pathogenesis of typhoid fever, it has however enabled us to understand this disease better and to fight it more intelligently. As is always the case, it is the prophylaxis which had been most benefited by this discovery. We know to-day that the most active agent in the propagation of typhoid fever is the use of water contaminated by the ejecta of typhoid patients, which furnishes a medium of culture favorable to these micro-organisms. In all epidemics which we observe to-day, it is always in the water that we find the contagious element; an element which we may cultivate so as to reveal fully its presence. In the remarkable lectures which Professor Brouardel gave recently, in the discussion which was raised in the Academy on depopulation, there was shown a series of facts which placed beyond doubt the propagation of typhoid as an agent most active in reducing the population of France.

Is this the only means of propagation of the disease? We do not dare to affirm this. In his excellent work on typhoid fever in the army, Kelsch shows a great knowledge of the complexity of the typhogenic factors and of the different conditions in which these factors may mutually aid each other. In the remarkable reports to the Academy, Lardier of Ramberville, has shown perfectly the precise facts of contagion and propagation where water did not play any part; so that while well knowing that we possess in contaminated water the most important factor, it must be admitted that there exist others which are also active. For the bacillus to develop itself, it must have a favorable soil, and the best is found in that condition of the economy which is produced by over-work. I have already explained this fact in my "Hygiene Prophylactique," and I have endeavored to show that while over-work favors the development of the typhosus bacillus, the presence of this latter is necessary to characterize typhoid fever. It should be important to distinguish the typhoid state produced by over-work from typhoid fever properly speaking; the first results from the penetration of poison in the economy; the other, on the contrary, results from an infection, or rather from a toxic infection, the

* Translated from Bulletin de Therapeutique, by Dr. J. Howe Adams.

bacillus typhosus secreting a poison most active, described by Brieger, under the name of typho-toxin. This knowledge has been utilized in prophylaxis, and to-day we find every city engaged in supervising the water supply of its inhabitants. I will not take up this point again; I have insisted at length upon it in my Prophylactic Hygiene. From this knowledge is derived the results of private and public hygiene, for public hygiene it is necessary to supply good water; in private hygiene the obligation exists to destroy as quick as possible the dejecta of individuals suffering from typhoid fever, and to disinfect those places contaminated by these dejecta. Also in a case of typhoid we must use a series of precautions which must be rigorously observed, both by those who have access to the patient and those who nurse them. For the disinfection of the sick room, I recommend to you the sulphate of copper, of which you can make strong and weak solutions. The strong solutions must contain twelve and a half drachms to the quart, and weak solutions three drachms to the quart. The first will serve for the water closet, and you should arrange it so that the basin which receives the dejections should always contain a certain quantity of this solution. The same solution will serve to wash the soiled sheets, and to clean the water closets. The weak solution will be used to wash the hands and face of the nurses and those portions of the body of the patient soiled by the dejecta. You should caution the nurses not to eat in the sick chamber. You should caution them also to wash their hands every time they touch the sick person.

When pure water cannot be obtained, it should be boiled or sterilized. To obtain this sterilization, it is necessary to elevate the temperature of the water by the aid of apparatus varying according to the different methods. I will not speak of filtered water for this reason. The filtering tubes called the Chamberland filter, constitute an immense progress in the question of filtered water, but they must be so constructed that they have neither crack nor chink. It must also be arranged that these tubes can be cleaned, that is to say, exposed to a hot fire every eight to fifteen days—a precaution rarely observed by those who possess these filters, and who, confiding in the statement of merchants, believe that it is unnecessary to clean the filters to have pure water. This is a great mistake. Finally, a much more serious question is whether these filtering tubes which oppose the passage of microbes offer a sufficient barrier to the secreted poisons? This point has not yet been proven. Boiled water does not present any of these inconveniences; the boiling destroys at the same time the microbes and the poisons. Some have claimed that this boiled water is liable to produce indigestion; this is less likely to occur than one would suppose. The recent work of Guinard throws light on the facts. Guinard has shown that while the boiling lowers, it is true, the hydrometric degree of the Rhone and the Seine, it does not deprive the water of its principal calcareous matter, excepting well water; but this is an advantage, inasmuch as this boiling deprives the water of its carbonate of calcium.

As for the gases contained in water, the boiling, even prolonged, does not drive them out completely; and, what is more, water takes back the gases very quickly again.

The following figures, borrowed from Guinard, show you well the facts I advance:

After the action of heat, 102 c. c. of water of the Rhone contains 5.4 c. c. of gas, analyzed as follows:

Carbonic acid, 1.10 c, c.
Oxygen, 1.30 c.
Nitrogen, 3.00 c. c.

After boiling for 24 minutes, this water contains again, immediately on cooling, 1.90 c. c. of gas, analyzed as follows;

Carbonic acid, 0.30 c. c.
Oxygen, 0.30 c. c.
Nitrogen, 1.30 c. c.

This same water, after standing 24 hours in a cool place, has reabsorbed a new quantity of gas, and contains—

Carbonic acid, 0.30 c. c.
Oxygen, 1.10 c. c.
Nitrogen, 3.30 c. c.

We see then that boiled water may reabsorb a certain quantity of gas which it takes from the surrounding atmosphere; we see, on the contrary, that by a prolonged boiling, it is impossible to drive completely

the gases from water. Even then, in cases of doubt, counsel the use of boiled or distilled water.

I approach now the study of the new treatment of typhoid fever.

Intestinal putridity plays a considerable rôle in typhoid fever, and the name "putrid fever," given formerly to this affection, is exactly right, if one is in sympathy with our modern researches.

This putridity results from the peculiar condition of the digestive tract, and the numerous ulcers which develop themselves, carrying away now and then some portion of the mucous membrane; also is the fœtid condition of water closets a constant factor of typhoid fever.

It is against this putridity that the greatest efforts have been made in late years, and is by Bouchard, who has the honor of to have undertaken the study of intestinal antiseptics in typhoid fever. The agents of this antisepsis are most varied. At first Bouchard recommended charcoal, then iodoform, then naphthalin, and finally naphthol; and he has endeavored to show the great superiority of this last body over its predecessors. There exist, as you know, two kinds of naphthol, one more soluble, less toxic, but more irritant; it is naphthol alpha; the other, less soluble, more poisonous, but less irritant, is naphthol beta. It is this last to which Bouchard has given the preference, and he combines the naphthol with the salicylate of bismuth in the form of granules, taking a day from fifteen to thirty grains of naphthol.

Recently, at my suggestion, naphthol has been abandoned, and has been substituted by salol, for this reason: Naphthol is always an irritant, it is at the same time often badly borne; salol, on the contrary, is very much better; more, salicylate of phenol is a medication which is not decomposed in the intestine. It is the best disinfectant for the intestine. I believe salol is the least poisonous. In the experiments made in 1887, with Dubref, and recorded in the thesis of my scholar, Dr. Sombard, we have therein stated that it takes one gramme of salol to a kilogramme of rabbit to produce death in these animals.

Salol has a sufficiently agreeable odor; it is not soluble, it has no taste, and you can administer it in wafers, or if preferred, suspend it in an appropriate menstruum. You can give thirty to sixty grains in twenty-four hours, adding to it if you wish the salicylate of bismuth.

To exercise disinfection is not enough; the febrile element must be controlled, and it is one of the most interesting points of the question which occupies us. Antipyresis has advanced in the last few years; a great number of active agents constitute a series of antipyretic remedies of which I have often spoken to you.

These remedies have been given for the cure of typhoid fever, and we see a great number of our confrères attributing a real value to them. I do not yet share this confidence. Hyperpyrexia in typhoid fever is not a manifestation of the general state of the patient; to believe that to lower the temperature lessens the gravity and intensity of the disease, is a great mistake. On one side, we see most grave cases of typhoid without hyperpyrexia; on the other hand, we can with antiseptic remedies lower the temperature to the normal throughout the disease without diminishing for a single moment the gravity of the disease.

I believe for the most part that these antipyretics decrease the urinary secretion and prevent the elimination of the poisons produced in so great a quantity in the febrile state; hence we have, I believe, sufficient reason to show great reserve in the administration of these analgesic antipyretics in the treatment of typhoid fever, and I share in this respect the opinion of Canlain in his communication made to the Berlin Congress.

Should we have the same reserve in regard to employing baths, either cold or tepid? In regard to cold baths, I have expatiated many times on their therapeutic value in my Hygienic Prophylactique, as in my Chirurgie Therapeutique; and the recent facts with which our colleagues of the hospital have become acquainted, particularly Juliel, etc., have not modified my opinion.

The cold bath is a good agent; it opposes not only the hyperpyrexia, but also the troubles of the nervous system. I object especially to the systematization of the method of Brand, and will review presently this point, when I have made known to you

the statistical results of the different methods in the treatment employed.

If you do not find me utilizing in my service this method of cold baths, it is because I found in lotions, envelopment in wet sheets, and especially in luke-warm baths, the same advantages as in cold baths without the disadvantages of the latter. Tepid baths are an excellent method of treatment in typhoid, and by tepid baths I mean those which have a temperature from 86° to 89.6° F. and offer a difference of about 18 degrees Fahrenheit, to the temperature of the patient. I have obtained with these tepid baths, quieting of the nervous phenomena, a sufficient lowering of the temperature, and a condition of freshening in the skin, which allow the patient to enjoy repose. Here is the order which I give with the prescriptions: I commence with spongings, then if the temperature passes beyond 104° F. I give tepid baths, one or two a day; according to the indications of the thermometer; the duration of the bath must be from 20 to 30 minutes, and when the patient is feeble, I give him stimulating drinks in his bath; if this is followed by a very intense ataxo-adymania, I use enveloping in wet cloths. The duration of this enveloping must never exceed 30 seconds.

In conclusion of the treatment of the fever, I must bring to your notice quinine and the benzoate of soda. Of all the medicines used in typhoid fever, quinine is the one which is the best able to meet the general indications in the pharmaceutical treatment of typhoid fever.

If physicians abandon big doses of quinine; if they content themselves solely with small doses of 15 grains a day, they will not consider quinine in the same light as the many medications claimed to cure typhoid, and we know certainly that our colleagues, Grancher in particular, assert that the salts of quinine have truly a specific action in such cases, especially when given to children. I do not absolutely hold this opinion; meanwhile, I reassert that quinine is a medicine which has found its place in the great majority of typhoid fever eases.

It is Albert Robin who has shown the most partisan spirit in the employment of benzoate of soda in typhoid fever. He has, in effect, shown a new theory in typhoid fever based on the following circumstances: In typhoid fever there is no augmentation of oxydation, but rather organic disintegration; the oxydations are less, they do not present the combustion, or the modification of the waste which results from the increase of the disintegration. What is more, the different emunctories are crippled, poisons and waste of disintegration encumber the economy. In this theory, favorable or unfavorable crises result from the elimination, more or less active, as Robin says, of these products, or from their retention. Again, all the medicines which are for the purpose of increasing the consumption of waste products should be considered. Albert Robin believes especially in salicylic and benzoic acid; he give 30 grains of benzoic acid, or 60 grains of the benzoate of soda. I do not believe the method of our colleague will become very generally used, and if salicylic acid and the salicylates are employed, it is rather in the rôle of disinfectants. When benzoic acid or its derivatives are used, it should be done with the greatest caution.

All the methods of which I intend to speak to you form two classes of treatment, a systematized form, that is to say, a treatment intended to be applicable to every case; the other class, on the contrary, uses a treatment following the indications of the symptoms. The systematized treatment uses invariably the cold bath, or antisepsis with tepid baths according to Bouchard; others employ nothing but the salicylate of bismuth. I am strongly opposed to this plan of systemization. In a disease like typhoid fever, which shows itself in the most varied form, we cannot admit that any one treatment can be applied indiscriminately to every case. Our medication should vary according to the patient which we have before our eyes. I wish to convince you of this fact, supported by the recent statistics furnished by hospital practice in Paris. In a very interesting communication made by Merklen to the Hospital Society of the results of the different forms of treatment of typhoid fever in the Parisian hospitals, are found figures of very great value. The first point shows that the mortality varies according to the period; sometimes it raises; sometimes it is lowered. In the period which extends from 1868 to

1882, the mortality in the hospital from typhoid fever was 21.5 in a hundred. From 1882 to 1883, it was lowered to 14.1 in a hundred, and in 1889 it was 13.1 in a hundred, and that no matter how the treatment varied. Again, in 1890 it is lowered, and has descended under 12 in a hundred. This mortality does not affect equally men and women, as has been well pointed out by Hayen; the number of deaths among women is much greater than in men. This difference is fixed at the following figures: 12 in a hundred for women, and 5 in a hundred for men; it will be seen that it is more than double.

Has the treatment any influence in the reduction of the mortality of typhoid fever? The difference is most trifling considering the experience of hospitals. If we take as a basis for comparison the year 1889, we find in the general mortality of the different hospitals of Paris with the symptomatic treatment 11.33 out of a hundred die, and with the systematic treatment with cold baths 11.28 out of a hundred die. The smallest mortality obtained in 1889, followed the combined use of quinine and tepid baths; it was 7.33 in a hundred. But Debové has shown how much it is needful to be prudent in drawing conclusions, seeing that by the absolutely expectant plan, without the employment of hygienic treatment, he had a mortality at the Andral hospital of 9.2 in a hundred.

Recently, in a communication, Merklen has shown the fact of which I have long insisted in my "Clinique Therapeutique;" how difficult it is to rely on statistics for therapeutic conclusions, and you will permit me to recall here what I said ten years ago in the first edition of my Clinique. Recalling the words of Forget, who also expressed it: "Statistics is a good child who gives herself to the first comer." You may believe that one epidemic cannot be identical with another; the age of the patient, the state of his forces, the greater or less concentration of the poison, the period of the year, even the country, influence the whole pathology and change the progress of typhoid fever and its mortality. We see epidemics relatively benign succeeded by epidemics of the most deadly character. And accordingly if you should apply the same method of treatment to the first and second epidemic, in the former, you would have very great success, in the latter, almost certain failure. I find the confirmation of these ideas in the discussion which was held in the Society of the hospital, when Merklen showed the variations of the mortality according to the epidemic. Is this variability of mortality in epidemics of typhoid fever, a contradiction to the recent data which we have acquired concerning this disease? Not at all. What have we shown as a bacteriological study? It has been shown that the virulence of the products secreted by these microbes varies according to many circumstances, and it is probably that under certain conditions, the knowledge of which we have not yet learned, the bacillus typhosus acquires a virulence very much more grave. To this, borrowing from the works of Klebs, the gravity depends a great deal on the soil where the microbe develops itself, the debility of the organism produced by over-work, insufficient alimentation, etc.

What conclusions can be drawn from all this? There is nothing which authorizes the promotion of systematic medication over the method of symptomatic medication; it is the attention which adapts the medicine to the patient who is being cared for; it is the punctuality and rigor with which the treatment is applied; it is the rapidity with which the phenomena are combated which contain the whole success of the medication employed.

Do not forget three elements of success which always enter into your therapeutics. Disinfection of the intestinal contents, abundant diuresis and the most scrupulous hygienic care. As for diuresis I have adopted the opinions of Albert Robin and believe like he that it is useful to favor as much as possible the elimination of the products of organic disintegration. I believe the kidneys to be the best agent for this purpose; hence I give my patients abundant drinks to favor diuresis. I believe that the success obtained by Debové in the expectant plan lay in the fact that he gave abundant drinks continually to his patients. Unfortunately, in grave cases the wretched condition of the mouth, joined with the delirium with which the patient is plunged, renders the administration of drinks

very difficult. The form of drink which I prefer is lemonade made fresh with wine, iced if preferred.

Finally, the great question of hygienic care predominates over all therapeutics; we can explain in this connection the glaring difference which exists in the mortality in hospital and private practice. In spite of the devotion of our attendance on our hospitals, it is impossible for us to give to our hospital patients the scrupulous care which can be exercised among the better classes. In these latter cases, the sponging, the cleaning of the mouth, the disinfection of excrement, the use of a room well aired, the employment of nurses whe can continually be changed so as not to leave the patient for an instant, all constitute chances of success much greater than those who can attend hospital practice.

HYDRASTIS VS. PHTHISIS.

BY A. JUDSON PALMER, M. D.

I have used hydrastis for the past thirty years as a local application to inflamed mucous surfaces; and noting its efficiency, especially in inflammatory conditions of the pharynx, it occurred that it might be equally efficacious in the treatment of bronchitis if it were possible to apply it directly to the inflamed membrane. Accordingly, about four years ago, to accomplish this I administered it by inhalation in the form of a vapor. The result was very satisfactory. I then used it in a case of bronchitis complicated with chronic hepatization, and was surprised to find that not only the bronchitis, but also the pneumonic deposit disappeared. I have used it in the different stages of phthisis over three years, and my experience justifies me in asserting it to be a remedy of remarkable efficacy if properly and perseveringly used.

During the first month of treatment the night-sweats usually disappear, and the cough and expectoration is greatly diminished; the patient has a better appetite, better digestion, and gains in strength.

I obtain the best results by using it in combination with chloride of sodium, one part of the fluid extract of hydrastis to three parts of a saturated solution of the salt.

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Editorial.

TOXIC PARALYSIS.

Leaving to one side the partial paralyses caused by the syphilitic poison, which are varied, *sui generis*, and irregular, we find that the paralyses caused by toxic substances generally—arsenic, lead, copper, opium, etc. —present certain features in common.

1. These paralyses are symmetrical. Both lower extremities are affected, generally one about as much as the other. If one arm is taken, the other will not generally be found exempt. Certain muscular groups are especially invaded; the extensors in preference to to the flexors. This is especially the case in lead palsy, where we have the "drop wrist," owing to paralysis of the extensors of the hand and fingers.

2. The lower extremities are, as a rule, the first affected, the upper extremities not participating in the motor impotency till later. Often the arm, hand, and forearm escape; when paralyzed, are less so than the leg or foot. The paralysis is more pronounced in the feet than in the legs, in the legs than in the thighs, in the forearm than in the arm.

This symmetrical distribution, and this limitation of the paralysis is characteristic of chronic poisoning by opium, lead, arsenic, alcohol, etc.

3. There are quite often vaso-motor disturbances, such as œdema, redness of the integuments, ecchymoses, following even slight irritations, and trophic disturbances, manifesting themselves in a squamous condition of the skin, thickening of the nails, etc. Sensory disorders, such as formications, twinges, pricking and burning sensations, numbness and cramps, along with anæs-

thesia or hyperæsthesia of the integuments, are still more often noticed. In alcoholic paralysis, intense pains, simulating the *douleurs fulgurantes*, in the paralyzed members, are quite common. In this form of paralysis, moreover, atrophy of the affected muscles, with granulo-fatty degeneration, is by no means unusual.

Toxic paralyses are liable to be confounded with hysterical paralyses, but in the latter the subjective disorders of sensibility are much less marked, the anæsthesia is more complete, and contracture is frequent; moreover, hysterical paralysis is often a monoplegia or a hemiplegia, and the character of symmetry is wanting.

The toxic paralysis belong to the class of paralyses from peripheral neuritis; the type is alcoholic paralysis. The spinal cord is generally found intact, as well as its roots, but the peripheral nerves are affected with a particular neuritis, in which the irritation is localized at first in the neurilemma, where it gives rise to a nuclear proliferation. Next in order the myelin becomes granular and fatty, and finally disappears; the axis cylinder is then invaded and perishes. Such are the conclusions set forth as the result of numerous histological examinations by Lancereaux and Lendet, Dreschfeld and Greenfield, Broadbent and Buzzard, Oppenheim and Bernhardt, Gambault, Dégerine, and others. In 1864, Lancereaux first showed that there was a quite special clinical type, and even at this period when the existence of peripheral neurites was unknown, he raised the question whether these paralyses were really central. His studies had reference at that time, principally to alcoholic paralysis. Later, Lendet confirmed his researches, and pointed out the frequency in alcoholic patients of cutaneous hyperæsthesia coincident with enfeeblement and paralysis of the members, lesions incompatible to a disorder of the peripheral nerves. Since then, observations have multiplied, especially in England. To confine ourselves to alcoholic paralysis (the best studied of the toxic paralyses) the clinical characters are in brief as follows (we closely follow Rendu's admirable description): These paralyses are flaccid, with slow and progressive onset, predominate in the inferior extremities, and give rise to a variety of paraplegiæ ordinarily incomplete. The extensor communis digitorum, the extensor proprius pollicis, and the lateral peronei, are the muscles most strikingly affected, while those of the thigh, the trunk, and the superior extremities are ordinarily respected. It is always the peripheral extremities, hands and feet which are affected in preference. When the disease is pronounced, the foot drops, the patient stubs his toes in walking. Electrical contractility is gravely compromised, or is wanting. The paralyzed muscles are hyperæsthetic; there are painful points along the tract of the nerves of the paretic members, and besides the disorders of sensibility before mentioned, there are frequently psychical troubles, and motor incoördination with trembling of the members.

The prognosis is generally unfavorable; in long standing cases there is destruction of important nerves, and incurable atrophy of the muscles. In bad cases, such as have been recorded by Oppenheim, besides the diffuse lesions of neuritis, secondary foci of chronic myelitis have been found.

A LESSON IN LONGEVITY.

The life of the venerable George Bancroft, just brought to a close at the advanced age of nearly ninety-two years, aside from the importance of its literary achievements, has another lesson to impart—that of its longevity, and the means by which it was attained. Here was a man who had spent a long active life in literary studies, and in endeavors to preserve that life. The illustrious historian, regularly every day for scores of years, took long rides on horseback, even in extreme old age, and when unable any longer to indulge in this form of fresh-air exercise, resorted to long walks. With strong mental powers, and using every means for their development, he never carried these to excess, to the detriment of health. Here is the point, he had respect to the animal part of his being, which requires fresh air and exercise for its full and complete development and preservation. Thus living, as it were, a dual existence, he was enabled to prolong life through three generations, lacking but eight years of complet

ing a century. He exceeded the Biblical limit by twenty-two years, and if, as we are now taught, the physiological extent of full and complete life is one hundred years, he may be said to have nearly completed it. The secret of his long life was his moderation, and the outdoor existence that he led. Here will be found the secret of many, if not every life extended to such a length.

There is no system of living that will insure longevity; but by moderation, and a due appreciation of the fact that however high we may have risen, we have an animal existence that must be cared for, we may prolong life to even one hundred years. It is our duty to endeavor to do so.

We are told that a man should be young until fifty; in the prime of life until seventy or seventy-five, with work completed at, say ninety; living on in old age until one hundred. Mr. Bancroft very nearly completed the latter period—that of old age, proving again that mental work is not necessarily detrimental to long life, but, under certain conditions, may be conducive to it.

Continuing the reflections, and making deductions from the lives of a number of people who have attained great age, the following advice is offered on how to reach a hundred years:

1st. Live as much as possible out of doors, never letting a day pass without spending at least three or four hours in the open air.

2d. Keep all the powers of mind and body occupied in congenial work. The muscles should be developed and the mind kept active.

3d. Avoid excesses of all kinds, whether of food, drink, or of whatever nature they may be. Be moderate in all things.

4th. Never despair. Be cheerful at all time. Never give way to anger. Never let the trials of one day pass over to the next.

The period from fifty to seventy-five years should not be passed in idleness, or abandonment of all work. Here is where a great many men fail—they resign all care or interest in worldly affairs, and rest of body and mind begins. They throw up their business and retire to private life, which in too many cases proves to be a suicidal policy.

During the next period—the period from seventy-five years to one hundred years, while the powers of life are at their lowest ebb, one cannot be too careful about "catching cold." Bronchitis is a most prolific cause of death in the aged. During this last period rest should be in abundance.

RECTAL ALIMENTATION AND MEDICATION.

We believe few physicians appreciate the opportunity afforded of securing the absorption of nutrients and drugs by the rectum when the palate or stomach rejects them.

This valuable method is generally regarded as a *dernier* resort in malignant disease of the stomach or œsophagus, and presumed to be inconvenient and impracticable in less grave cases.

It would be profitable for every physician to inform himself fully as to the *modus operandi* of employing rectal alimentation and medication in all cases in which it is indicated.

Some important points to be considered are the proper nutrient to use, its condition of assimiliability, proper quantity, apparatus, the condition of the rectum and colon, the tolerance of the individual, etc.

In some recent contributions to this subject, some suggestions as to the application of this method are presented.

By the use of enemata life can be sustained indefinitely with little, if any, loss of weight to the body.

In a large proportion of cases in which rectal aliment is used, true digestion of albuminous, saccharine and fatty food takes place, by virtue of a reversal of the normal peristalsis of the alimentary tract.

While this is the case, there are doubtless instances in which retrostalsis does not occur, and for that reason the food used should first be artificially digested before being injected into the rectum.

The enemata should, if possible, be administered by the physician himself. When difficulty in retaining the aliment is encountered, the colonic method is preferable, the food being propelled through a rectal bougie. The food should be of the temperature of the body.

The rectum having once become intolerant of enemata, absolute rest must be given to

that viscus for a few days, and reliance be placed on nutritious inunctions of the surface of the body.

In diseases of the stomach, even when a portion of the food ingested is retained by that organ, only to undergo fermentation, inducing thereby pain and distress, it is more logical to resort to rectal alimentation, not as an adjunct to, but as a substitute for, stomachal ingestion.

Certain organic lesions as well as functional disturbances of the throat are curable, by means of rest to that organ, and by no other means. In rectal alimentation we have a safe and sure means of nutrition, pending the necessary period of rest to that organ.

Milk, eggs, brandy, concentrated predigested foods, are the best aliments for rectal nutrition. No one article should be used for too long a time, but frequent changes should be made, observing the greatest care to prevent irritation of the rectum, or intolerance of that organ for the nutriment required.

As to the absorption of drugs by the rectum, there is no question that the constitutional effects of medicaments may be obtained in this way. The rectal suppository, consisting of cacao butter incorporated with the various therapeutical agents, affords the most efficient and pleasant mode of administration in our possession. Rectal suppositories satisfy all requirements as a local or constitutional remedy; they are neat, convenient, and in almost every instance preferred by the patient to the administration of the same drug by the mouth. In the administration of anodynes, it is certainly a superior method of administration to all others, as the sensitive stomach is no longer a barrier or excuse in the administration of even the most disagreeable medicinal agent, for we well know in many instances that this organ is either tolerant to opiates, or the patient has an invincible objection to taking them. The effects of rectal medication embrace a wide range of actions, including anodyne, antiseptic, alterative, and astringent. In severe pain, they certainly afford the best and safest source by which our patient's suffering can be relieved, as the action upon the rectal surface of a diffusible anodyne is quite rapid, and produces an effect as soon as when administered by the stomach. In all inflammatory or painful affections of the abdominal or pelvic organs, this plan of administration succeeds better than all others.

THE MOTHER AS A COMPETITOR OF THE DOCTOR.

The latest device for selling medicines without the physician's prescription, has been discovered by a Scranton doctor, who advertises a line of specifics for children's diseases, under the name of the Hand Medicine Co.

Under the caption of "Mother for Doctor," this enterprising practitioner guilefully says, in the pages of a literary monthly of the highest standing:

Mother makes a good doctor, if she has the right remedy. As a doctor for babies, mother has several points of advantage. She is always at hand. She has sympathy for the sufferer. She sees the first symptoms, and can take that critical stage in time, and check a difficulty which, if permittted to have a few minutes more of progress, might establish itself in the precious anatomy. Mother can do this with all the certainty and assurance of a physician of twenty-five years' experience; for Dr. Hand, of Scranton, Pa., has spent that length of time in the study of infantile disorders, and has put up in convenient form the remedies which give unfailing relief to the little sufferer.

Thus—as certainly as if he were personally present—the mother who has any of Dr. Hand's Remedies within reach, can have twenty-five visits of a physician of twenty-five years' experience for twenty-five cents.

For twenty-five cents, the Hand Medicine Company will send to any one who cannot procure Dr. Hand's Remedies from the local druggists, a bottle of any one of the following preparations: Dr. Hand's Colic Cure; Dr. Hand's Cough and Croup Medicine; Dr. Hand's Diarrhœa Mixture; Dr. Hand's Teething Lotion; Dr. Hand's Pleasant Physic; Dr. Hand's Worm Elixir. A book containing the strong endorsements of many grateful mothers will be sent free to any one who will address the Hand Medicine Company.

Evidently the Scranton doctor has decided that cut rates and quick transit from disease to health is a shorter route to wealth, than the tardy success of practice *a la mode*. The alterative accumulative effect of the alluring twenty-five visits of a physician of

twenty-five years' experience, for twenty-five cents, quite equals in its devastating possibilities the "Rum, Romanism, and Rebellion" cry, which is said to have contributed to the defeat of a certain well known political magnet, with Presidential aspirations.

How successful Dr. Hand may be in launching this enterprising method of curing infants' ills, depends on the gullibility of American mothers. We hardly think many mothers, intelligent enough to subscribe for or read a reputable magzine, will be likely to substitute Dr. Hand's remedies for the advice of the family doctor, when their babes are ill. In the mean while, the doctor with ethical scruples against advertising, plods his weary way aghast at the want of recognition his attainments receive. It would appear that if the immortal Dane, made famous by Shakespeare, were to moralize today, as to professional ethics, he might give voice to such sentiments as these: "To advertise, or not to advertise," or rather, "how to advertise," that is the question. "Whether 'tis nobler to suffer the slings and arrows of outrageous fortune or make war against the Code of Ethics," and by opposing, end it. Aye, there's the rub that makes us pause, and count the cost.

DOES THE STUDY OF MEDICINE TEND TO MATERIALISM.

J. Richardson Parke, Ph. G., M. D., expresses himself on this subject in a recent contribution to the New York Medical Journal. He is inclined to think that medical and scientific pursuits foster materialism, and advances some theories as to the functions of the brain and the futility of considering this recording organ as the seat of mind. Dr. Parke thinks that all science is deeply tinctured to-day by materialism, and his inference is, that medical science therefore tends to materialism. That it has not so tended in his own case, however, Dr. Parke admits, as his views, though he learned medicine at the feet of European Gamaliels, are still orthodox rather than materialistic, as may be noted from the following expression of sentiments:

It can not be denied that all science is today deeply tinctured by materialism. It was a matter of interested observation to the writer, while a student of medicine in Europe, under the immediate intellectual umbrage of her great exponents there, to see it made the very corner-stone of biological teaching; and it may occasion surprise to some that, notwithstanding our greater latitude of thought and sentiment pervading every department of philosophy, the heterodoxy of medicine obtains much more largely there than here; where, apart from the studies which are best pursued from a materialistic standpoint, the deeper and more representative currents of American science appear to set in quite a contrary direction, many of our best minds professing to entertain more satisfactory reasons for adhering to their earlier belief in the existence of the Unknowable than to run a risk, which every material casuist is willing to admit, of ultimate shipwreck on the shoals of skepticism.

We know that material stimuli act upon the mind by physical channels, as moral emotions—such as fear or anger—do upon the body through the efferent nerves; but these reciprocities of action, while clearly establishing the principle of connection, are absolutely fatal to that of identity. Indeed, it has never yet been clearly shown, to my mind, that the brain is at all capable of originating impulses, although the doctrine of automatism is somewhat vaguely taught in the text-books of physiology, both Foster and Kirke, however, attributing it to the mere stimulus of the blood, whatever that may mean in the sense applied. Instead, then, of crying out with the Epicureans, "Whence is evil?" might we not better ask: Whence is thought, if not from some principle, or essence, or power, or thing, within and beyond our mere materialistic comprehension?

We are inclined to think that the study of the sciences does materialize, and that medical men see so much of the nether side of life that they are skeptical, on this account, of all in the realms of fancy not yet demonstrated as fact.

Inasmuch as there are two sides to this question of the conception of mind and its material or anti-material character, we might present with propriety, in contrast with the views of Dr. Parke, those of Dr. Henry Maudsley, who, in an article on "The Physical Basis of Mind," in the February Forum, says;

What is mind? The key of its construction and function is the mechanism of what physiologists know as a simple reflex or excito-motor act; that is to say, an act of the same kind as those which a person performs

when he sighs, coughs, sneezes, swallows, or winks, or as that which a butterfly does when it procreates after its head has been cut off. The type of the mechanism is, first, a sensory or so-called afferent nerve, along which, in response to an impression made on its endings from without, an ingoing current passes to a central nerve cell; and, secondly, a motor or efferent nerve, going from the cell, along which the outgoing current passes to the muscles that react upon the outer world. That is the simple nervous structure by which a message is received from without and by which fit reaction is made thereto. Practically, it is the entire nervous system of the lowest creature which possesses one, and it is the basis of the more complex structures that subserve the adjustments of higher creatures to their environments; for out of such simple factors, by multiplication of cells and fibers and by complication of their tracts and connections, the complex structure is built up.

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In this mode of complication, several ingoing currents, that proceed from differentiated sensory endings, are associated by means of central nerve cells and their connections, and are distributed thence along several tracts or lines of conduction. In the complex network of plexus thus formed by the junction of cells and by the multiplication of their connecting fibers on the same level, are the obvious means of many fit distributions, of energy and of different combinations of distributions. Higher in the scale of animal organization we find a further complication of different levels of plexuses—the superposition of areas of higher level of reflex action, with which areas of lower level are connected. Here are the obvious means by which pregnant impulses may pass from the higher areas of the nervous hierarchy to different subordinate centers, whence they may be suitably distributed. Considering that there are some hundreds of millions of nerve cells in the cerebral cortex of man, that every cell has its connection or connections there, and that every one of the multitude of fibers goes separate to its destination, we may perhaps go some way toward realizing in imagination how exceedingly fine, numerous, complex, and intricate are the nervous networks which constitute the mental organization. There are thus abundant means of physical reflection to serve all the purposes of mental reflection.

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Manifestly, the cortical plexuses do not all act together, and do not act at random, when they discharge the several functions of mind, any more than the muscles do when they perform special bodily movements. Definite combinations of nerve tracks are formed to serve the different requirements of sensory impression and motor reaction; and these forms or patterns of associated tracks are more or less transitory or permanent, according as they minister to temporary needs or to the fixed habits of function. Most minds show some special proclivities or aptitudes, and some minds show notable aptitudes; that is to say, in some brains certain associations of tracks, ready formed or easily formed, constitute natural endowments of structure. In this way, perhaps, a fixed mental habit of ancestors endows the offspring with a proclivity and aptitude to the exercise of some particular function, an association framed in the past for a temporary purpose having been so fixed by habit of exercise as to become an inherited aptitude or instinct.

In the varying firmness of such an organized tract of thought lies the explanation of the effects or non-effects of education to undo it. It may be so firmly set that systematic training to a new order of functions will not permanently dissolve it, the proclivity to fall into the old form being irresistible; or it may be so loosely fixed that another kind of training than that to which it owed its formation easily breaks it up and uses its component parts for the organization of other forms. In the latter case, education and training may do much to mold mental formation; in the former, they can do little to change the laid-down lines of function into which the mind is destined to grow in maturity. In any case, the most hopeful way to modify the inherited aptitudes is to transplant the individual into entirely different circumstances from those in which the parent lived and in which he was born. So, perchance, a new order of impressions, soliciting a new order of reactions, will dissolve old combinations and frame new ones, and effect by degrees a change of internal organization. To have an insane inheritance, and to be brought up by those who bestowed it, is to be twice penalized.

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Having a good hold of the principle of the reflex structure and function of the brain, we can easily understand how such mental moldings are effected, and how, indeed, they cannot fail to be effected when they are resolutely put in hand and carried through. Tradition, education, conventions, and custom will do the work surely. Individual minds that go astray in development, yield abundant illustrations of a like process of mental warping into positive distortion or deformity.

THE AGE OF THE GYMNASIUM.

The recent gift of $20,000 by a public spirited citizen towards the erection of a gymnasium at the University of Michigan, is a generous and commendable act. It is also in accordance with the spirit of the age. Gymnasia are being erected and equipped so rapidly at all educational centers that it is rather taken for granted an institution of learning, lacking in this respect, is greatly behind the times. Such certainly seems to be the case, for, in the announcement of a college, academy, or school, the fact that a gymnasium can be found there is given prominence, being supposed a great winning card. However true this may be, we believe that to all persons a gymnasium may not prove of as great benefit as is commonly supposed, for the following reasons:

Exercise to be beneficial should never be violent, but of the simplest nature. It never should exhaust. It never should be indulged in for a great length of time, and, it should be, as far as possible, conducted out of doors. The nearer we come to this ideal the better. But how do we find it in practice. Often a stuffy, ill-ventilated room, completely housed in, with plenty of sky-flying apparatus, turning bars, etc., where the patrons are allowed to tear around and perspire to their heart's content. The means for self-injury are hence varied and powerful, and should be guarded against. On that account we recommend that such an institution should be placed under the direct supervision of a medical director who fully comprehends the responsibilities of the work. He should see that the privileges of such an institution are not misused by over-indulgence on the part of its patrons, but that it affords opportunity for sound physical development and not for the making of acrobats. Conducted in a proper manner, a gymnasium properly constructed, so that abundance of fresh air shall enter, and with light aids to exercise, may become a power for good.

The writer further maintains that any aid to exercise that affords a greater strain than the body weight should be sparingly or never indulged in. For example no exercise should be so severe as to lift the body from the floor, being when long continued, too severe for the average man. He therefore condemns the trapeze, the turning bar, and "hand over hand" climbing. He also condemns the use of dumb-bells and swinging clubs. What we wish to insist on is that exercise to be beneficial should be of a moderate nature, and the kind and duration should be suited to each individual case. Of course, in a large public gymnasium it becomes impossible to do this, hence the necessity of providing only the lighter aids to exercise.

It is well also to remember, that however great fortunes may be put into a gymnasium, the campus will still afford the best means of health giving sports. There is nothing, in our opinion, that is so conducive to good health as out-of-door exercise—and a brisk walk or a lively game that combines pleasure with exercise we value above all.

PROTECTION FOR MEDICAL AUTHORS.

The probability of the proposed copyright bill becoming a law is a subject for general congratulation. If this bill be enacted, medical authors will have their property in the fruit of their pens protected, and may hope to be guarded in future from the wholesale robbery which has hitherto been carried on.

The House of Representatives has passed the bill, and *à propos* of this, the editor of Harper's Weekly voices the following song of victory:

The passage of the International Copyright bill by the House of Representatives is an event of great importance. It will pass the Senate probably without delay, and the President has already expressed his approval of it. This is the final success of an intermittent effort of more than fifty years, during which the most eminent American statesmen have advocated the measure, and projects of law and treaties have been carefully discussed. The opposing forces have been of various kinds. Chiefly they have been the general conviction that literary property is different in kind from other property, and that the law has acknowledged the difference; that the measure would heighten the prices of books; and that it was not for the interest of American printers and publishers.

The reciprocity of action upon the part of other Governments which the act contemplates will follow its passage, and then the results of the measure will appear. Its effect

is, in brief, to extend the author's copyright to all countries in which his work is sold, without injury to the interest of the local manufacturer and publisher. It removes from a great industry the imputation of unfairness, and throws off the burden which has hitherto opposed literary effort in this country. The bill is emphatically a measure of fair play, which will inevitably promote a friendly feeling between all the countries which it affects. In the first week of the session the House has led the way in legislation which honest men in every country will approve.

Book Notices.

A GUIDE TO THE EXAMINATION OF URINE. For the use of physicians and students. By James Tyson, M. D. Seventh edition. Revised and corrected. With colored plate and wood engravings. P. Blakiston, Son & Co., publishers, Philadelphia. Price $1.50.

No modern physician can practice medicine intelligently without knowledge of so important an aid to diagnosis and treatment as thorough examination of the urine.

This knowledge can be readily obtained, after a little experience, by any physician who will take the pains to inform himself as to the proper methods of testing urine, and provide himself with the simple apparatus necessary.

The seventh edition of Dr. Tyson's manual demonstrates the adaptability of his work as a guide to these methods and its popularity. After an introductory chapter on Secretion of Urine, Reagents, and Apparatus Required for Examination, Selection of Proper Specimens, General Physical and Chemical Characters of the Urine, a clear presentation of the normal and abnormal composition of the urine, and the significance of each and its proper recognition, follows. The general practitioner and student will find it a helpful guide to perfecting their knowledge of this adjuvant to a successful treatment of many ailments.

THE HOME MAKER.—A Monthly Magazine—Edited by Mrs. Croly (Jennie June). Published by the Home Maker Co., 44 East 14th St., Union Square, New Square. Vol. V, No. 5, Feb'y 1891. Single numbers 20cts. Subscription Price $2.00 a year.

The Home Maker is a marvel among the galaxy of modern magazines, it is first in its own sphere, the family circle.

Each number has many admirable short stories, poems, and articles descriptive of modern art, drama, architecture, fashions, and social and domestic themes of interest.

It is admirably printed and illustrated. In its tone and purpose it reflects that polished yet simple life and refined taste that characterizes the cultured element of modern society.

We give below the contents of the February number and marvel that the publisher can profitably issue so complete a home magazine at so low a price as $2.00 a year.

Typical Homes of America—Craigie House; A February Valentine; My Guest; Up to Summerville Gap; The Loyal Girl of Winchester; His Name; St. Valentine's Day is To-morrow; Seven Children; Twilight Songs, Some Early Homes of Mankind—The Cave Dweller; A Daughter of Brabant; The Italian George Sand; A Recreative Art Class; The Modern Drama; Home Art; A Valentine Party; Practical Dwellings; Practical Photography, No. 5; Books; How to Go to Bed and How to Get Up; The Winter Hearth; The Domestic Club; To the Queen's Taste; Fashions; Sleeves, By An Artist; The Shopper; Hester Prynne; Correspondence and Queries; The Cycle Department; Publisher's Notes; Rainy Day Observations.

MANUAL OF CLINICAL DIAGNOSIS. By Dr. Otto Seifert and Dr. Frederick Müller. Translated from the fifth German edition. Enlarged and revised by William Buckingham Canfield, A.M., M. D. Second English edition. With fifty illustrations and one colored plate. G. P. Putnam's Son's, publishers, New York. 1890. Price $1.25.

This work, the previous editions of which are already well known as constituting a reliable guide to diagnosis, has had such additions made to it as were rendered necessary by the recent advances in bacteriology. It contains also a handsomely executed colored plate of the various bacilli that have been determined to have causal connection with disease. It considers *seriatim* the methods of determining the significance of departures from normal standards of the various organs under the subject headings of: The Blood; Temperature; Organs of Respiration; The Sputum; Laryncoscopy and Rhinoscopy; The Circulatory System; The Pulse; Digestive and Abdominal Organs; The Urine-producing System; Transudations and Exudations; Parasites; The Nervous System; Analysis of the Pathological Concrements; Metabolism and Nutrition. It is well indexed, and contains a dose-table of remedies of service for reference.

Notes and News.

Improved Hypodermic Injector for the Administration of Professor Koch's Remedy for Tuberculosis.—

J. Ward Cousins, M. D., F. R. C. S., calls attention to the syringe we illustrate as being well adapted for using Koch's "lymph." It consists simply of an elastic measuring ball and an injecting needle. The balls are made in several sizes, and each ball is capable of holding a definite amount of fluid, and marked with a number indicating its capacity in minims.

The improved injector is especially in-

tended for the administration of the antituberculous "lymph," and its cost is so moderate that a separate instrument can be employed for every patient; it possesses many of the special qualities of Professor Koch's more elaborate syringe. The measuring balls are made in two convenient sizes, one having a capacity for holding one fluid centimetre, and the other for exactly half that quantity. The needle is attached to the ball by a simple joint, and it carries a large boss, which serves for a handle during its introduction. The injector can be instantly and perfectly charged by simply compressing the ball between the thumb and finger, and then inserting the open end of the joint in the lymph. The needle must then be fixed on the ball and filled by a similar movement. The little instrument should always be carefully preserved from dust, and both before and after every operation it ought to be washed out with absolute alcohol, and then by a ½-per-cent. solution of carbolic acid.

Press Tributes to the Disinterestedness of the Medical Profession.—

The New York Tribune says:

Physicians are almost the only members of the community who do not make money out of their important discoveries. It is a point of honor among them to allow the whole world to profit by their researches when they find a new remedy for wide-spread disease. Their reward is the benefit which the sick and helpless receive, and in the gratitude, which should not be stinted, of the community at large.

The Minneapolis Tribune follows in the same line:

The greatest and best medical and surgical discoveries have been free gifts to suffering humanity the moment their value has been demonstrated. The use of anæsthetics the principle of vaccination, new or improved operations in surgery, new drugs and methods of treatment, have invariably become the common property of the faculty from the hour of their discovery.

The Medical Record, moralizing on this recognition of the ethical principles that actuate the medical profession remarks:

We see much in public print directed against the courtesies and the ethics of our profession, that it is refreshing to hear kind words. Medical men are not angels; they are in fact very human creatures with much hard work to do, and often many mouths to feed; but there is a strain of benevolence in all their daily work. From the beginning they are taught a doctrine of helpfulness to others, and are made to think that their life-work should not be one in which every service must receive its pecuniary reward. Koch's discovery will not be valueless if it only impresses on the profession and the laity these facts.

Chicago as a Place for Doctors.

The Secretary of the Illinois State Board of Health, in his recent quarterly report, states that there has never been such a rush of medical men to Chicago as during the past three months. More than two-thirds of the certificates issued were to physicians who wished to practice in Chicago. And never before, in the same length of time, have so many professional frauds attempted to obtain a foothold in Chicago. It is evident that the increase of population, and especially the coming World's Fair, are the attractions. Eleven applicants were refused licences because they had diplomas from schools not in good standing, because their professional records had been tarnished elsewhere, or because they could not comply with the requirements of the Board. The anxiety to settle in Chicago is also manifest in the incorporation of the so-called medical

companies, medical associations, and dispensaries, thus taking advantage of the lax laws and attempting to evade the Medical Practice Act. New York, not having the World's Fair, will take pleasure in sending on her medical men, that will not be missed, here.—*Medical Record.*

An Ovation to a Doctor.

The Dietetic Gazette informs us that, while Dr. Kiernan, Chicago, was on the witness-stand in a Chicago court, November 12th, testifying with regard to the sanity of a candidate for the Cook County Insane Asylum, named John Feeny, the latter threw a mal-odorous egg with such well-directed aim as to smash it upon the witness' head. He gave a second egg to an attendant, which he had provided in case of failure to hit his mark.

Dr. Kiernan is something of a mud slinger himself, with his pen, if we may judge from some of his contributions to literature. Perhaps this was a case where the egg was mightier than the pen.

The Efficiency of Western State Boards of Health.—

In the Sanitary News, Chicago, Jan. 24th, J. Berrien Lindsley, M. D., LL. D., of Nashville, Tenn., speaking of State Boards of Health, says:

In no part of America have the objects of such Boards met with so great favor as in the new, wide-awake, and rapidly-advancing States of the Northwest. The great farming States, especially Michigan, Illinois, and Minnesota, may be mentioned as illustrations. The volumes issued by the State Boards of Michigan and Illinois have given those States a National, even more, a European reputation. Michigan and Minnesota are also distinguished for the wonderful co-operation received from local boards, which in each State number fifteen hundred or more.

The Bacteriological World.—

A new illustrated magazine, entitled the Bacteriological World, has just appeared, having for its mission the general dissemination of knowledge on the subject of bacteriology in general, and pathological micrology in particular. The editor is Paul Paquin, M. D., V. M., of the Missouri State University, Columbia, Mo., and the work is published by "The Bacteriological World Publishing Co.," of Columbia.

Hot Water in a Hurry.

Very often a physician needs hot water in the middle of the night when there are no conveniences at the house of his patient to obtain it. The Dixie Doctor suggests that if there should be a kerosene lamp handy, with a chimney having a corrugated top, this want can be easily met. Place an ordinary tin cup with a sufficient amount of water upon the top of the chimney. The corrugations let out the heated air so that the lamp will not smoke, and the water will quickly become hot.

Lament of the Bacilli.—

For ages we lived, and on mankind we preyed,
With none to molest us or make us afraid;
In decillions we throve, and quintillions were born,
To render our enemy, man, more forlorn;
Though Lilliputs we, yet our forces united
At last have our Brobdignag foeman affrighted,
And with "lymph" they assail us, till now, like poor Lo,
Or Chinese cheap labor, we're fated to "go."
So, trim little headstones we last week bespoke,
And we yield up our spirits to Pasteur and Koch!

—*Life.*

Dr. James A. Lydston,

Late Chief of Eye and Ear Department Pension Bureau, Washington, D. C., and Professor of Chemistry, in the Chicago College of Physicians and Surgeons, has removed to Denver, Col., where he will re-enter the practice of his specialty. His change of location is necessitated by the illness of his wife.

"The Jolly Bacillus."

It is reported that a coffee-house, with pretty waitresses, has opened in Berlin, bearing over its portals a sign consisting of Koch's portrait, with the inscription, "The Jolly Bacillus."

Dr. Benjamin Lee,

Secretary of the State Board of Health of Pennsylvania, has accepted the position of Secretary of the Section on State Medicine of the American Medical Association.

Therapeutic Brevities.

The Administration of Oxygen by the Rectum and Hypodermatically.—Dr. Francesco Valenzuela, of Spain (El Siglo Médico), has published a paper on new methods of administering oxygen with especial reference to the treatment of senile pneumonia. Believing that oxygen inhaled in dyspnœa frequently fails to relieve because it does not come in contact with a sufficiently large vascular area, he began administering the gas per rectum, and also hypodermatically. In every case in which oxygen enemata were given, dyspnœa was decidedly and permanently relieved. The ease and rapidity with which the gas was absorbed by the intestine were remarkable; indeed, it seemed to be as readily taken up by the intestine as by the lungs, four injections of five litres each being absorbed in an hour. Thus the intestinal mucous membrane may become a valuable adjunct to the lungs. In employing oxygen hypodermatically, Dr. Valenzuela believes that it is important to introduce the gas in its nascent taste. The arm was selected for the injections, and the quantity of gas introduced varied from half a litre. Cellular emphysema was, of course, produced, and a sensation of heat was complained of, but both disappeared within a few hours. There was no calmative action or slowing of the respirations, but there was marked stimulation of the heart, a desirable result in the collapse that follows pneumonia and fevers of a typhoid character, and cerebral congestion and asphyxia. No mention is made of the temperature of the gas that was administered, a point which, according to Dr. B. W. Richardson, is of great importance.—*Lancet.*

Treatment of Uterine Catarrh.—The Revue Obstetricale et Gynècologie (December, 1890) gives the following treatment for catarrh of the cervix uteri. After stating that it is best to have a syringe which will deliver the stream in jets, and that the injections should be repeated twice a day, the medicated solution is valuable. These solutions may be either antiseptic or astringent. A useful antiseptic solution is to be made by taking four and one-half ounces of boracic acid, and dividing it into ten powders, one of these powders is to be placed in three pints of boiling water; or, with equal advantage, we may employ ten drachms of the sulphate of copper, which are to be divided into ten powders, and one of these powders placed in three pints of boiling water; or, again, two and one-half drachms of beta-naphthol may be added to eight ounces of alcohol. Of this last solution, a teaspoonful is placed in a quart of boiling water; as soon as the water is cooled to a temperature of about 105° or 110°, it may be injected. In other cases, four and one-half ounces of borate of soda may be divided into ten packages, and the contents of one package be added to three pints of boiling water; or in its place may be employed fifteen grains of nitrate of silver, dissolved in three ounces of distilled water, of which a desertspoonful is to be placed in three quarts of boiling water. In other instances, from twenty to one hundred drops of a solution of the per-chloride of iron may be added to three pints of water, and used instead of the solutions already named.—*Medical News.*

Phytolacca Decandra in Mastitis.—Phytolacca decandra (poke-root) has long since been used by the country people for "garget" or caking of the udder in cows. In cases where there is caking of the breast and threatening suppuration, it may be prescribed with certainty; if fever be present, then one may combine it with aconite or veratrum viride. The breast may be kept moist with the dilute tincture. If mammary abscess is threatened, then:

℞ Tinct. phytolaccæ dec., ½ ounce.
Aquæ, 2 pints.

M. ft. sol. Sig.: To be used as a dressing.

The water should be warm; apply a pledget of cotton saturated; inject with a syringe, if necessary, or instead one may apply pledgets saturated with the following:

℞ Tinct. phytolaccæ dec., 1 part.
Glycerini, 10 parts.
Aquæ, 10 parts.

In cases of soreness of the breasts in little children, and even where suppuration is present, phytolacca is the remedy; it should be applied as the dilute tincture—one part of the tincture to four or five of water. If the case be unusually severe, then one may administer the remedy to the "wet nurse," the child being influenced through the milk.—*Annals of Gynæcology.*

A New Treatment of Syphilis.—In seeking for a therapeutic method which should be free from the usual objections, M. Quinquand has made use of a plaster made as follows;

℞ Emplast. diachyli, 30.00 grammes,
Calomel, 10.00 "
Olei ricini, 3.00 "

This is spread on strips, so that each square decimeter represents 1.20 gramme, of calomel. One square decimeter is applied over the spleen, and allowed to remain for a week. It is then replaced by a fresh plaster, which remains another week, and so on. This procedure is not, as may seem, empiric, but is based on the time required for the elimination of the drug. This, according to the researches of Witz, takes place chiefly between the fourth and eighth days. It attains its maximum toward the tenth day, and then remains stationary. From the eighth day, exanthematous syphilides could be seen to fade. With these the treatment is as satisfactory as any known. In this manner, the organism is constantly subjected to the influence of a minute dose of mercury.—*Le Progress Medical.*

Oil of Turpentine in Continued Fevers of Malarial Origin.—Dr. McMullen states that oil of the turpentine is a faithful regulator, and restorer of excretory power, besides possessing no mean antiseptic powers. The caution to be observed is, not to give it in too large doses, but to obtain that just, mild, and elegant, degree of stimulation as shall be sufficient to overcome the torpidity of action, which always, to some extent, obtains in this fever. If given to the degree of producing congestion and strangury all good results will be lost, and great harm will inevitably ensue. The dose, for an adult, which he generally prescribes is, from five to eight minims in emulsion, to be taken every four hours. Thus:

℞ Olei terebinthinæ pur., ʒ iij.
Olei gaultheriæ, gtt. xv.
Pulv. acaciæ, ʒ ij.
Sacch. albi., ʒ ij.
Aquæ aromat., q. s. ad., ℥ iv.

M. Sig.—Teaspoonful, diluted, every four hours.

This prescription will bear the addition of bismuth subnitrate should diarrhœa supervene.—*Therapeutic Analyst.*

Prevention of Pitting in Small-Pox.—The pitting of small-pox has been entirely prevented by Dr. Lewintaner, of Constantinople, by antiseptic treatment, as follows: The entire head and face, except eyes, and the neck, are covered with plaster consisting of three parts carbolic acid and fifty parts each of olive oil and starch. The body is covered over with a mixture of three parts salicylic acid, thirty parts starch, and seventy parts olive oil. The internal treatment consists in giving quinine in acid solution.—*Wien. Klin. Woch.*

Lancing Children's Gums.—An expert says of gum-lancing: It is useless as far as giving relief to symptoms; as far as facilitating or hastening teeth. It is useful only as bloodletting, and ought not to be used as such. It is harmful in producing local trouble; in producing general disturbance on account of hæmorrhage; in having established a method which is too general to do specific good, and too specific for universal use. It is to be used only as a surgical procedure to give relief to surgical accidents.—*The Doctor.*

Treatment of Laryngeal Spasm.—The treatment of spasm of the glottis is often difficult and uncertain in its results, but Sir Morell Mackenzie writes that by setting up a rival reflex the laryngeal spasm may be instantly overcome. The patient need only take a pinch of snuff or black pepper into the nostrils, or if neither can be obtained, the nares should be tickled by a feather. The immediate result is a paroxysm of sneezing, after which the breathing is relieved.—*Hospital Gazette.*

Menstrual Colic.—Dr. J. C. Da Costa prescribed the following in a case of menstrual colic:

℞ Chloroform (pur.).
Spt. camphoræ, ää f ʒ ss.
Spt. æther. nitrosi.
Spt. æther. comp., ää f ʒ ss.

M. Sig.—f ʒ ss-j in ℥ j of water, containing ʒ j of spirit. frumenti, every half-hour for three doses.

—*Jnl. Am. Med. Assoc'n.*

Ointment for Comedones.—The Canadian Pharmaceutical Journal quotes the following prescription, said to be used by Unna in the treatment of comedones:

℞ Solution of hydrogen peroxide and vaselin, of each ℥ ii.
Lanolin, ℥ i.
Acetic acid, ʒ i.

Mix and perfume.

Antiseptic and Deodorizing Mouth-Wash.—The following lotion for the mouth is highly recommended:

℞ Acid. carb., m xx.
Acid. acetic, ʒ i.
Tinct. myrrh, ʒ ii.
Honey.
Aqua dist., ad. qs., ℥ viii.

Misce.

Medical Progress.

An Important Attachment to the Otis Dilating Urethrotome.—The dilating urethrotome of Professor Otis is so familiar to all operating surgeons, that it is unnecessary to describe it here, or to add any further testimony as to the magnificent results that have been achieved by the use of this, the most perfect of instruments. It has been a problem in my mind for more than a year, whether it would not be possible to add to this instrument some contrivance whereby strictures might be located by the same instrument that is used in effecting their division, and at the same time retain all the advantages of the original instrument. It is first necessary to establish the normal calibre of the urethra by the urethrometer in a case presented for operation.

What I consider an additional convenience in the use of this instrument, consists of the attachment of a stricture locator, marked A. We have, first, the original groove on the upper surface of the superior shaft, ending in a slot at the lower end. Into this groove another grooved shaft is inserted, and at the extreme end of this is attached the above-mentioned locator marked A. A steel wire, ending in the blade B, is introduced into this grooved shaft, and it is so arranged that the locator serves as a guard to the blade B, and both the locator and the knife are concealed in the deep slot at the end of the upper bar.

This instrument is introduced closed, and the dilatation accomplished to the required degree. The handle C is now drawn forward, which brings the locator against the stricture; it is then fastened in place by button D, and the blade B drawn out by handle E, which divides the stricture. The blade is then pushed back into its guard (the stricture locator A), the button D is now turned, releasing the locator A, which is then brought forward against the next stricture, if another exists. Having once introduced the instrument and attained the proper dilatation, it is not necessary to remove it or change the dilatation until the operation is completed.

I think it is well to have the superior shaft marked in half-inches, in order that one may know how far the instrument has passed into the urethra. The concealment of the stricture-locator was suggested by me to the manufacturer about the middle of October, 1890. It was at that time thought it would be impossible to make it work satisfactorily, but, after experimentation, Mr. Stohlmann found that it could be successfully accomplished. On the 9th of January, 1891, after the cuts had been made and the description was ready for publication, I was informed that Dr. C. F. Fluhrer had also invented a like attachment to his own instrument. In view of the above-given facts, it seems to me that the coincidence is most extraordinary.—George Wackerhagen, M. D., in *N. Y. Med. Jour.*

Enuresis.—Children who have graduated from their napkins, and who are troubled with "wetting the bed," are a source of great worry to themselves and to their attendants. Often the condition is occasioned by neglect on the part of the parent. A child is permitted to retire at night with a full bladder, and may get innocently into the habit of emptying the same in its sleep. The distension produced by the excessive accumulation weakens the organ, so that we should remind parents of the importance of early teaching their children to empty their bladder often, at least two or three times a day, and always before retiring; and it would be a good plan if in the early morning hours, particularly if the child seem restless, it be taken up and placed upon the vessel. I question whether mothers sufficiently appreciate the importance of regulating not only the action of the bladder, but also the bowels. If a specific hour could be selected for this purpose, a habit could be established which would tend in the direction of healthfulness. Our best way then to treat this bed-wetting trouble is to prevent it, and if we impress mothers with the fact that in many cases neglect or improper attention will result in diseased conditions of the excretory organs, we are working in the right direction. Instruct that the child uniformly be given a light supper. It should not be permitted until several years old to eat its supper at the family table; or if it does, its diet should be circumscribed, and the old-fashioned milk porridge, or bread and milk, is the best supper for young children. The night clothing should be loose and comfortable about the hips and groin. The best night dress for a child, winter or summer, is the union waist and drawers, open behind, as night gowns slip up around the neck, and the surface of the body is too much exposed, both in winter and summer; the garment should be loose and comfortable, and as the child grows older, if it grows rapidly,

the out-grown drawers should be discarded. Tightness and constriction should never be permitted in the neighborhood of the genital organs, as irritatation may there be developed. In the boy, attention should be directed to the condition of the prepuce. If it be loose, freely movable, and the opening sufficiently large to enable proper cleansing, let it alone. If, however, there be narrowing and adhesions, even though no special trouble has developed, it may eventually lead, if not to worse trouble, to bed-wetting. Having removed all possible causes, such as errors of diet, neglect of responding to Nature's wants, improper hygiene of the external genital organs, constricting and objectionable clothing, if the difficulty still be present, we may justly conclude that there is some irritation in the neighborhood of the bladder itself, some inate weakness which demands attention. Recent writers have commended the administration of atropia, commencing with the 1-200th of a grain three times a day, and increasing to the point of toleration. The diet should certainly be continually regulated. Meats which increase the acid condition of the urine should be avoided; a milk diet is preferable. Strychnia, given in doses of 1-120th to 1-60th of a grain, as may be required, according to age, three times a day, is an excellent tonic to the muscular coats of the bladder. Strychnia, in combination with atropia, is an excellent prescription. Dr. Powell, in a recent number of The Annals of Pedriatics, reports sixteen cases (wherein the causes external to the bladder had been eliminated) treated successfully with *Rhus aromatica*. He advises that we commence with minute doses, gradually increasing a drop or two each day, so as to prevent any gastric disturbances. He commends the following formula:

℞ Ext. rhois aromat. fld., ʒ iij.
Elixir. aromaticæ, ℥ jss.
Aquæ cinnamomi, q. s. ad ℥ iij.

M. Sig.—Half teaspoonful, to be increased to one teaspoonful gradually, four times a day after eating.

He very properly lays stress upon diet and general regimen.

Cantharides in very small doses, combined with an agreeable vehicle, may be of service. I suggest the following:

℞ Tinct. cantharides, gtt. xvi.
Mucil. acac., ʒ ii.
Pepsin cordial (Parke, Davis & Co.), ʒ xiv.

M. Sig.—Teaspoonful three times daily.

These agents and others of their kind unquestionably act as a direct stimulant to the mucuous membrane of the bladder, and probably arouse a tonic condition. The cantharides soothes the sensitive bladder upon the same principle that it relieves the pain in a burn upon the skin, when applied direct, one part to forty of water. Of course, it needs to be given carefully, and not continued too long. The application of electricity, applying a mild current, one pole along the spine, and the other over the bladder, I have often found of service.

In this connection, particularly at night, the quantity of drink taken should be limited, as it burdens the bladder. Of course, it goes without saying, that the child should have plenty of fresh air and exercise. We should pay special attention to the skin, for we all know what an intimate relation exists between the skin and the urinary apparatus. By keeping the skin in a healthful state, cleansing it thoroughly by bathing morning and evening, we favor its activity, and in so far as we favor excretion by the skin, we relieve the urine of irritating properties. If the child be not too young, or even then, there may be gradually developed the custom of administering an almost cold sponge bath in the morning, followed by brisk friction with a crash towel.—Dr. I. N. Love, in *Medical Mirror*.

THE HYPODERMATIC INJECTION OF STRYCHNINE IN SNAKE-BITE.—Dr. T. Lauder Brunton, in the British Medical Journal, publishes an interesting article on Snake Venom and Its Antidotes. In concluding it, he says:

In some most interesting experiments, Sewall has shown that the system may gradually become resistant to the action of snake venom, just as it may to that of infective diseases, such as anthrax; and by injecting small quantities of venom he has rendered animals immune from the effects of larger doses which rapidly killed other animals not protected by previous inoculation.

Several points of resemblance appear to exist between snake venom and the albuminoid products of anthrax. Thus Martin has found that when the anthrax bacilli are grown in alkali albumen, and the bacilli themselves afterwards separated by filtration through porcelain, the filtrate contains a mixture of proto- and deutero-albumose, and a trace of peptone formed by the action of the bacilli on the albumen. The albumoses produce, like those of snake poison, much local œdema, sluggishness, coma, and death. Like the venom-albumose, its activity is lessened, but not destroyed, by boiling. But, in addition to these substances, he has obtained

an alkaloid which has the same action as the albumose, but much more powerful, and this alkaloid, he thinks, is present in a nascent condition in the albumose, and is separated from it by the tissues of the living animal into which it has been introduced. Whether something of the same sort exists in serpent venom or not, one cannot say, but the analogies between it and the products of disease germs are becoming every day more apparent, and it seems highly probable that while studies of serpent venom may throw light on the products of disease, a study of the latter may lead to the discovery of an efficient antidote to the former.

He believes that the whisky or brandy usually given in cases of snake-bite, acts locally in the stomach, coagulating any venom which may have been excreted, and preventing reabsorption; suggests to keep up artificial respiration, and wash out the stomach with whisky or brandy; that this plan might be combined with the subcutaneous injection of strychnine. While the circulation and respiration were maintained by strychnine, alcohol might be freely given, and after it had been removed by vomiting, or the stomach tube, it could be given again and again, so as to wash the stomach out with it.

A recent discussion of the value of strychnine in snake-bite, published in the Therapeutic Gazette, is interesting. The editor of this journal says:

We therefore believe that if sufficiently large doses are used, we shall hear of successful instances of treatment in cases of bites by cobras. We are of opinion that medical men finding symptoms of coma following snake-bite need not be apprehensive of exhibiting strychnia because they are not quite able to satisfy themselves whether such insensibility is the direct result of snake-poison, of alcohol recklessly given as a remedy (we believe erroneously), or of the mortal fear which so invariably follows the bite of a snake. For alcohol in excessive doses produces paralysis of the vaso-motor system as a toxic effect, whilst fear does the same from psychic causes. Therefore, if this theory, upon which this treatment has been founded, that snake-bite does the same, be correct, the subcutaneous injection of strychnia should be equally efficacious in either case.

Combination of Operative Treatment with Koch's Remedy in Phthisis.—Professor Sonnenburg has published (Deutsche med. Wochenschrift, January 1st, 1891) a preliminary report on the results of the combination of operative interference with injections of Koch's fluid in four cases of pulmonary phthisis. The operations were performed in the presence of Koch himself, in the Moabit Hospital at Berlin, between December 12th and 17th, 1890. The object was to test the practicability of treating cavities of the lungs by making an opening from the outside through which necrosed tissues might be eliminated, and then applying Koch's method in the usual way. In three of the cases there was a cavity in one apex; in the fourth the vomica was lower down but very superficial. In the former the anterior wall of the cavity was firmly adherent over a large surface to the costal pleura, so that the cavity could be opened without any risk of pneumo-thorax. The following is the mode of procedure adopted: —Chloroform having been administered, an incision is made beginning at the sternum and extending outwards from 10 to 12 centimetres, in a direction parallel to, but from 1½ to 2 centimetres below, the clavicle. The pectoralis major is next divided, and, the soft parts being held aside with retractors, the lower edge of the first rib is laid bare. The periosteum in then detached from the anterior and posterior surfaces of the first ribs with blunt instruments so as to avoid wounding the intercostal artery. A broad retractor is then passed between the posterior layer of periosteum and the pleura so as to protect the latter from injury, and an arched segment is cut out of the lower border of the rib with cutting forceps. By this means the intercostal space is enlarged, and the pleura is next exposed by careful separation of the muscular fibres. An exploratory puncture is then made into the lung with a small syringe, which usually enters the cavity, as is shown by the escape of a certain amount of pus. The opening made by the syringe is next carefully enlarged with a fine pointed thermo-cautery, red hot, which is pushed slowly along the track of the exploring needle into the vomica. When the cavity is reached a little thick muco-pus generally wells up in the bottom of the wound. The opening having been somewhat enlarged with the thermo-cautery, both the cavity and the wound are stuffed with sterilized cotton. Sonnenburg at first used iodoform wool for this purpose, but discontinued its use so that the effect of Koch's fluid might be ascertained apart from that of the iodoform. The three patients with cavities at the apex bore the operation well, and the subcutaneous injections of Koch's fluid were soon afterwards proceeded with. It is too early to judge of the results, but, so far, they do

not appear to be very striking. In the fourth case, the lung was not adherent to the pleura, and the opening into the cavity was followed by the development of pneumothorax. The patient, however, recovered from this, and the lung is now fixed to the chest wall by pleuritic adhesions.

NEW METHOD FOR RADICAL RELIEF OF HERNIA.—Dr. Edoardo Bassini, of Padua, recently published a memoir* descriptive of a new method devised by himself, by means of which he believes that much more certain and permanent results can be obtained than have yet been by the old operations. The object for which he strives is, to restore the inguinal canal as nearly as possible to its normal shape and direction, making it run obliquely as in health, and giving to it its two walls, between which the spermatic cord shall pass.

We will describe this operation briefly, omitting of necessity most of the details, and the various modifications adopted by the author in order to meet special indications. The aponeurosis of the external oblique, overlying the inguinal canal, and the pillars of the external ring, are first exposed. Then, after the bleeding has ceased, the aponeurosis is incised over the whole course of the canal, from the external to the level of the internal ring, and is dissected out from the contiguous structures so as to form two flaps, which are folded back to expose fully the underlying tissues. The spermatic cord is now drawn out and separated from the neck of the sac as far back as may be into the inguinal fossa. After this the sac itself is opened, adhesions, if present, broken up, and if there be thickened omentum it is usually excised. The hernia being reduced, the neck of the sac is twisted and ligated, and the portion below the ligature cut off. This completes the second state of the operation.

The third step consists in dissecting away from the aponeurosis and adipose layer, above and below the outer margin of the rectus muscle, and the triple layer formed by the internal oblique and transversus abdominis muscles and Scarpa's fascia. The flap so obtained is drawn over and attached firmly by interrupted silk sutures to the posterior border of Poupart's ligament, forming thereby the posterior wall of the canal over which runs the spermatic cord. The final stage of the operation consists in reuniting the divided portion of the external oblique aponeurosis by interrupted sutures. A new canal is thus formed for the passage of the spermatic cord, and the abdominal wall is able to resist any attempt at redescent of the hernia without the aid of a truss. The external wound is now closed, antiseptic dressings applied, and the operation is complete.

Dr. Bassini publishes a table of his operations, and the results obtained. He has treated 251 cases of non-strangulated hernia, of which 108 remained cured at periods of from one to four and one-half years after the operation. In 131 cases operated upon from a month to a year before the tables were compiled, there has also been no relapse. Four patients were lost sight of; in seven cases there was reappearance of the hernia; and one case died of causes unconnected with the operation. Encouraged by the results, the author feels justified in bringing his method to the notice of the profession, and asking that a trial of it be made by others who may be dissatisfied with the older operations.

*Nuovo Metodo Operativo per la Cura dell' Ernia Inguinale, pel Dott. Edoardo Bassini, Professore Ordinaro di Clinica Chirurgica. Padova: R. Stabilimento Prosperini, 1889.

RECOGNITION OF TUBERCLE BACILLUS IN SPUTUM.—Dr. E. Czaplewaski (Cent. f. Bakt., Nos. 22, 23, Bd. viii, 1890), after speaking of the various methods of staining bacilli, points out that there are certain disadvantages associated with the discolorization of the tissues by acids. Of the mineral acids, he considers that nitric acid is the worst because seldom obtained without the nitrous acid; then comes hydrochloric acid, and, lastly, sulphuric. Unless great care is taken to wash out these acids, the tubercle bacilli are soon bleached, and permanent preparations are not obtained. Of all staining reagents he considers that fuchsin, with carbolic acid, is probably the best. By the method which he recommends, the whole process is completed in a very few minutes, and he maintains that he obtains equally good or better results than by the acid method, in addition to which, the whole process takes only two or three minutes. After preparing his cover-glass in the ordinary manner, he stains with the Ziehl-Neelsen carbolic acid fuchsin by holding the cover-glass in a pair of forceps with the film upwards, and then dropping sufficient of the staining fluid to cover the surface of the cover-glass. This is held over a small flame until the fluid is thoroughly heated but not long enough to cause drying at any point. The superfluous fluid is poured off, and the cover-glass is passed from six

:o ten times through a concentrated solution)f yellow florescein, to which an excess of nethylen-blue has been added. This fluid, iltered, removes the color from everything)ut the tubercle bacilli. In order to obtain ı good contrast stain, the cover-glass is then)assed from ten to twelve times through a :oncentrated alcoholic solution of methylen-)lue, after which it is washed quickly in :lean water, and may be examined at once, or nounted in balsam in the ordinary manner. The whole process only takes some two, or :hree minutes—a very important considera-:ion when a large number of sputa have to)e examined, as in clinical wards. One great advantage of this method is, that all)ther bacteria are stained, usually, a dark)lue on a light blue background. He con-siders that it is better not to add an alkali, ıs this gives a deeper blue, and the red)acilli do not show up so well as on a light)lue ground. The author further recom-nends that where mineral acids are used for lecolorizing, they should be greatly diluted. He also recommends that, after staining and lecolorizing by this method, the sections, or :over-glasses, should be washed in 70 per :ent. alcohol, and not in water. In every :ase a specimen should first be examined in water, as the organisms then appear to be arger than when mounted in balsam, and nore detail can be made out. He prefers nethylene-blue to Kühne's picric acid as a :ontrast stain, and insists most strongly)n the detection of tubercle bacilli; and, as he method described is both easily and quickly carried out, he thinks there is no onger any excuse, for even the busiest prac-itioner who does not examine the sputum of ıis patients in order to determine the pres-:nce of phthisis during its curable stages.—*British Medical Journal.*

THE TREATMENT OF EPILEPSY BY DIET-NG.—Certain drugs act upon the nervous :entres so as to control to some extent this endency to discharge. How is this done? The answer is twofold. First, these drugs nay act so as to fix the nitrogen compounds, ınd render them more stable, less likely to)art with nitrogen, less ready to discharge. Second, these drugs may act by preventing he formation of these unstable nitrogen :ompounds. This, I believe, is the real ex-)lanation. Under the use of the bromides, he molecules take in nitrogen less rapidly, ınd consequently do not become so unstable)r explosive.

If this is the case, can anything be done oward the reduction of the share of nitro-gen by feeding the patient after some fixed plan? To this I answer, yes. Take young dogs and cats, and feed them too freely upon meat, and you can make them—especially the dogs—very subject to fits similar to ordinary epilepsy in the human subject. Acting on this line, I have been in the habit of making my epileptics become strict vegetarians. Eggs, lean meat, red fish flesh, cheese, peas, beans, and all nitrogenous articles, are cast off. The amount of nitrogen entering the system, is reduced by this means to the lowest possible quantity. Under this dietary it is much more difficult for the nervous system to build up these unstable molecules, full of nitrogen, ever ready to fall into new combinations, and produce discharge of energy while these changes are being effected. By persistently reducing the daily consumption of nitrogen, there is not such a free formation of the catabolic molecules, the discharge of which is necessary for the production of the convulsive seizures of true epilepsy. This method of treating these patients has been of very great value in my hands. It would seem, however, that the restitution of the diet to an almost non-nitrogenous vegetable one, is of most use in those extremely catabolic conditions met with in the status epilepticus. It is in this variety of the disease that we have such poor results from the administration of drugs. I have treated some epileptics on the above food plan, and without drugs, the health being better than when taking the bromides without the restitution in diet. I would not go the length of saying that epilepsy is a food diathesis, yet I am strongly inclined to think that it tends this way.

LIFE-SAVING METHODS IN STILL-BIRTH.—In a paper on this topic, read by Dr. W. T. Turk, before the New York Academy of Medicine, the following indications are pointed out for treatment:

In all cases, to clear out the air passages, to restore the irritability of the medulla, to increase the force of the heart contractions, to relieve the plethora of the heart and the blood channels of the throax. In cases where the muscular tonus is preserved, these indications are easily fulfilled. Aspirated fluids and mucous should be cleared from the fauces with the finger. If the nasal passages are obstructed, mouth-to mouth insufflation should be employed. The child should be made to cry by flagellations, and the respiratory movements should be thoroughly stimulated by alternately immersing the child in hot and cold water. So far the procedure is a familiar one, but in a good number of cases in a few days

the skin becomes dusky, the heart action feeble, and it is evident that the child has been temporarily restored to life, only in the end to die of atelectasis. As a means of guarding against this fatal issue, due in part to imperfect expansion of the lungs, in part to lobular congestion, there is no method that rivals that of Schultze. By this, not only is good ventilation of the lungs secured, but the forcible expiration expells the materials aspirated from the bronchial tubes. A still more important action, according to Schultze, is the relief of the overloaded vessels. In cases of deep asphyxia in which muscular tonicity is lost, and the heart-movements scarcely perceptible, the method at first employed should involve the minimum degree of disturbance of the child. Dr. Turk illustrated, by means of a still-born cadaver, the various steps in the processes of Schultze and Sylvester for the revival of the still-born. He urges that the efforts should be persistent as long as there is the faintest prospect of success.—*N. Y. Med. Journal.*

The Treatment of Acute Anæmia.—The first indications, in severe acute anæmia, is to fill the blood-vessels in the three vital parts, the brain, the heart and the lungs, by maintaining the most favorable position of the body of the patient. The same result may be attained more tardily, though more conveniently, by temporarily shutting off from the circulation the larger extremities and the abdomen, by means of the elastic bandage. These two procedures have been termed auto-transfusion.

When the anæmia is so excessive that auto-transfusion is inadequate to restore the mechanical necessities of the circulation, the anæmia is fatal; but auto-transfusion may temporarily restore the functions of the heart, and fail to meet the needs of life. Then there is but one source of relief. This is to be found in the lymph. The rapidity with which the blood pressure is raised is remarkable. It is usually complete at the end of an hour or two. Therefore, when the symptoms of a low blood pressure remain after this time, and the mechanical necessities of the circulation are unmet, washing out the remaining lymph by means of a subcutaneous infusion of a neutral salt solution meets the indication of the case. The amount of salt solution, as well as its concentration, need not be very exact, nor need the temperature be so well regulated as in infusion directly into a vein, for the tissues act as a sort of a ballast and reduce the infusion to proper concentration and temperature. They retain also any excess in the quantity of the infusion until the blood pressure is reduced again by excretion.

After the mechanical needs of the circulation are met, the quality of the blood may be so impaired that a vital equilibrium cannot be attained, and the patient sinks into a state of rapid dissolution. For such severe anæmias, the infusion of the salt solution should be followed by the injection of blood, or by the transfusion of defibrinated blood. —*Jour. of the Amer. Med. Association.*

Absinth as an Intoxicant.—As commonly met with, absinth only contains about thirty minims of essence of absinth to the litre, the remainder consisting of alcohol together with from 16 to 100 drops each of the essences of anise seed and star anise seed, coriander, fennel, peppermint, angelica, hyssop, and melisse; and the color is given by fresh parsley or nettles.

MM. Cadiac and Meumer recently undertook to investigate the action of the various components of absinth, in order to ascertain to which of them its peculiarly intoxicating effects were due. They found that hyssop induces epileptiform attacks in ten-grain doses, while fennel induces visual troubles and languor. Poisonous doses of coriander give rise to sudden anæsthesia and muscular convulsions. Melisse determines a passing stimulation, followed by lassitude and sleepiness. Both varieties of anise seed possess powerfully stimulating properties, with consecutive visual troubles, muscular incoördination, dullness of sensation, with abrogation of the will, and heavy sleep.

Although not, strictly speaking, poisonous, anise seed is a violent excitant of the nerve centres, even in the relatively small quantities contained in the usual allowance of the liquor. If the dose be increased, epileptiform attacks are induced. A litre of ordinary absinth only contains about thirty drops of the essence—a dose which, if taken all at once, only gives rise to powerful mental stimulation, increasing the appetite and facilitating digestion. Moreover, it leaves behind it neither depression nor somnolence. The sum total of the effects of the blend is a sensation of comfort and physical and mental activity, followed by lassitude and indisposition to exertion, and in large doses to epileptiform attacks. The authors are disposed to treat the major part of the injurious effects to the collateral essences, and seriously recommend manufacturers to discard the use of several of these, and of anise seed in particular.

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Original Articles.

THE TREATMENT OF SOME OF THE MINOR CASES IN GYNÆCOLOGY.

BY W. THORNTON PARKER, M. D.

Concerning gynæcology, it would seem as if the profession had access to a quantity of excellent treatises written by master minds, and quite enough to occupy the leisure reading of busy practitioners, and yet, in spite of this fact, I venture to offer my contribution to the treatment of diseases of women, hoping that the simple directions embodied may be a benefit to the general practitioner in his daily work.

I suppose one of the commonest complaints made to physicians by our women patients is, that they are troubled with leucorrhœa. I do not think the outlined treatment in our text-books always the best. Experience has taught that vaginal injections are too often employed. Almost every work upon gynæcology acknowledges the importance of vaginal injections in the treatment of disease of the pelvic viscera, and at present it seems to be the general opinion that these must be received by the patient while lying on her back with elevated hips, if good results are to be expected.

The uselessness of the small stream attainable from the average syringe is well known, Numerous are the syringes and appliances offered, and yet many of them are so miserably useless, even dangerous, that Dr. Emmett concluded the only one worth using, is the "Fountain," and "that no patient can use vaginal injections sufficiently herself, but must have them administered by another." This demands the services of a nurse or servant, or elaborate preparations of bed and bed clothing, and the many details connected with the operation must be carefully carried out.

To subject a nervous patient to elaborate preparations for a simple vaginal injection, is an imposition, and undoubtedly very often sufficient to discourage further treatment; it should be accomplished with as little annoyance to the patient as the simple operation of washing her hands or her face.

A vaginal injection requires careful attention to details. Instances of severe uterine colic, peritonitis, and even death, have been recorded where these have been carelessly employed. We cannot, therefore, be too careful in explaining to the patient how to use the syringe properly.

In 1879, I devised a vaginal syringe, made entirely of rubber; the tubes are perfectly flexible; there is no terminal orifice, but velvet eyes for a distance of nearly two inches from the end, hence do not lacerate the mucous membrane, or produce the injury so often caused by the hard metallic tubes. The bulb and tubes are large, and supply a copious amount of water. For use in the recumbent position, some good douche pan is requisite, but in my experience the injection is best taken in the sitting posture, either on the "Bidet," or in the bath-room. With the "Bidet" the patient can make herself very comfortable, and the syringe is so constituted that very little effort is required to empty the bulb, and pour into the vagina a copious supply of water many times greater in volume than that of any other syringe, unless it be the "Fountain;" the dangers of uterine colic and other accidents are reduced to the minimum. A thorough washing of the vaginal walls is easily accomplished, and a large "Bidet" allows a much greater supply of water, and is consequently a more desirable apparatus than any bed-pan or fountain syringe. It is worth something for the patient to be able to arrange for and use the "Bidet" without trouble and innumerable preparations. The injection is best taken just before going to bed; I direct my patients to fill the "Bidet" as full as possi-

ble with water from 100° to 110° in temperature. It is well worth while to caution the patient, while using the "Bidet," to have the legs covered with warm stockings, and the feet in comfortable slippers, and a wrapper over the shoulders. I have known of many colds which were contracted by neglect of these simple precautions. The injection should be continued for at least ten minutes; the ingredients to be added to the hot water, when a medicated injection is necessary, should be of gentle and healing character. I never use such preparatious as tannin, oak bark, or any of the more powerful astringents, and even borax is best exhibited in weak solutions. In some cases of severe vaginitis, I have used successfully hollow vaginal suppositories.

In 1873 I devised a formula consisting of sulpho-carbolate of zinc 10 grains, and sulphate of morphia ½ grain, in these hollow gelatin suppositories, but, generally speaking, I derive the best results from large solid suppositories of boro-glycerid and gelatin. Since 1882 I have repeatedly called attention in the medical journals to the valuable properties of boro-glycerid as an antiseptic, and its especial value in gynæcological practice.

For those of my readers who are not acquainted with boro-glycerid, I quote the following from the British Journal:

Boro-glycerid is a body of definite chemical composition ($C_3H_8BO_3$), which forms a definite hydrate with a large quantity of boiling water, and is not decomposed when diluted in the proportions useful in surgery—one part to twenty or thirty parts of water. Such a solution is inodorous, has a slight saltish taste, and is quite unirritating to a wounded surface. Under its use, wounds of all kinds do extremely well, and heal fully as rapidly as under carbolic acid dressings, over which boro-glycerid has the advantage that it does not irritate the wound or the surrounding skin, and that it is, so far as is known, entirely innocuous when applied to a wounded surface.

The suppositories are of three sizes, No. 1, large, containing 3 i of boro-glycerid; No. 2 containing half that amount, and; No. 3 still smaller for rectal use.. These last are particularly valuable for the treatment of hæmorrhoids and pruritus ani; they are also useful in the treatment of thread worms. The largest size I prefer for vaginal use in the treatment of chronic leucorrhœa, vaginitis, and uterine diseases in general.

The largest suppositories should not be used more than three nights in succession, and experience has taught me that the best results are obtained by using them every other night. The boro-glycerid of Parke, Davis & Co., is an excellent application for a lacerated cervix, spread thickly on the diseased surface or used in the shape of tablets; it can also be spread on absorbent cotton, and introduced and applied in that manner. The cleanliness and gentleness of this remedy, and the steady improvement resulting in the use of boro-glycerid, will be very satisfactory to both patient and physician. As a vaginal post-partum injection, boro-glycerid is unquestionably superior to carbolic acid, and of course has nothing of danger associated with its use, neither is their any odor whatsoever.

I have had made a soft rubber "velvet-eyed" tube for injecting or measuring the uterus. It is somewhat stiffer than the rubber catheter, corresponds in diameter to No. 8 American scale, though it can be made larger or smaller in diameter if desired. It is ten inches long and fits securely over the nozzle of the common hard rubber uterine syringe; is marked in ⅛, ¼, and ½ inches. A solid rubber ring, fitting accurately, can be pushed forward to the cervix when the tube has been introduced into the uterus, thereby giving an exact measurement. In very many cases this tube can take the place of the steel sound in making a diagnosis, thereby avoiding injuries and dangers so common in gynæcology; it also has the advantage of being painless.

Dr. Storer considers that four general indications exist for vaginal injections: First, as lavement for cleansing purposes: Second, for the purpose of producing a deep-seated effect for relieving chronic congestions: Third, where an exosmotic effect is desired, as in the use of saline and other solutions: Fourth, when a local effect is desired corresponding to gargling the throat, etc.

Vaginal injections are unquestionably too often prescribed, and some physicians are reckless in directing ingredients for use that

are of the most unsuitable kind, and often productive of lasting injury, creating instead of alleviating disease.

At a meeting of the New York Obstetrical Society, in Nov., 1878, I reported the excellent results following the use of pessaries made of oakum or tarred jute. Tarred jute or refined oakum is a surgical dressing of great value, and it occurred to me that it might be valuable in gynæcology. So many cases have come under my care suffering from the use of hard rubber, glass, and other pessaries, which had not only failed to cure the diseases for which they had been employed, but by pressure had created other injuries perhaps more serious, that for the past ten years the only pessaries I have employed have been those made of tarred jute. For prolapsed and sensitive ovaries, for the treatment of prolapsus uteri, and for many forms of misplacement, I believe that nothing can be better. It is preferable to absorbent cotton, lambs' wool, or any other material of which I have any knowledge, keeping sweet and clean longer than any of them. The support it affords, and the sense of comfort induced, makes it very acceptable to patients. I apply it always in the ring form, introducing through the Sims' speculum, although it can be used in some cases with a "duck-bill." Where a large pessary is indicated, as in some cases of prolapsus uteri, it must be introduced without the speculum. The oakum never irritates, and is always free from the odor following the use of any other pessaries, or of absorbent cotton, and not only absorbs and disinfects the vaginal secretions, but does not lose its place, and continues to afford sufficient support until removed.

Remember, the brilliant results won by antisepsis, as introduced by Lister, although sought after before his day by many successful practitioners, which has for its object the attainment of perfect cleanliness. If from the earliest infancy every woman was taught and more generally brought up in the ways of cleanliness, much of disease, suffering, and even death, would be averted. Any physician can call to mind severe gynæcological cases which have had their origin and development in the neglect of the simplest rules of cleanliness. While I am not an advocate of injections in young women, I believe mild medicated solutions, and even an occasional suppository, are indicated. For married women, the boroglycerid suppository after each menstruation, is highly to be recommended.

In the treatment of all gynæcological cases, I believe the first thing to be remembered is, the employment of the gentlest means. It does seem as if some medical men consider the pelvic organs of women able to sustain almost any amount of hard usage.

Gynæcology is useful, and oftentimes indespensable, but every candid physician must admit there is a tendency to overdo, and that many women are subjected to needless and even fatal operations, when gentle means and cleanliness would have brought about equally good results. Conservative gynæcology has its victories as well as the more brilliant triumphs of laparotomists. I think we may safely say the reaction has already set in, and if this be true, it is a consumation devoutly to be thankful for.

There is in gynæcology considerable room for conservatism, and many practitioners recognize this fact. It will not do to subject very young women, who complain of pain before or after menstruation, to local examination; and especially is it undesirable to employ a speculum, unless actually obliged so to do. I know that many physicians will sustain me in this position; and I think we may trace, very surely, much of unhappy married life, much of physical suffering, and very much of post partum troubles in American women, to too much and improper gynæcological "treatment." Undoubtedly our young women suffer a great deal from habits of ease, luxury, idleness, and occupations tending to indoor life; besides clothing, food, and general surroundings are oftentimes sadly at variance with the recognized laws of hygiene. Among those who are forced to work hard, fare poorly, and rest little, in order to live, there is a great deal of complaint, and very commonly from amenorrhœa, dysmenorrhœa, or still more often leucorrhœa. Then young women are in many instances immediately placed under treatment, of which they

should know nothing. The land is full of amateur gynæcologists, and specula, sounds, and instruments of every kind are only too ready at hand. The evil is not exaggerated, and I am sure most practitioners can recall cases of unnecessary interference, or where, at most, only conservative gynæcology was demanded. Give the women a reasonable rest and relief from exciting causes; a tonic treatment; and a course of liquor sedans; then there will be plenty of time left for instrumental interference. Spare them from the speculum, and they will be healthier and happier. It is cruelty to subject the uterus to all the rough treatment so commonly afforded, for it is probed with sounds, pricked by tenaculums, daubed with iodine, blistered with nitrate of silver, and subjected to countless numbers of applications, not to speak of the legion of pessaries which are introduced, often for no good reason. All this is enough to make patients discouraged, disgusted, weak, and moreover likely to develop post partum troubles, even if it does not tend to sterility; and I believe in countless instances it conduces to unhappy married life. I repeat that this evil is a serious one, and will not diminish until its dangers are more generally recognized, and some strong reaction against the abuse asserts itself. Gynæcology is useful and often indispensable, and by the labors of many worthy men, merciful and honorable; but every candid physician must admit that we have in full operation all the gynæcologists we need, and many more than we need. As practitioners, we must not accept the fees and do the needless "operations" because "if we do not, someone else will," but must warn these patients that conservative treatment will oftentimes be more successful than the more impressive exhibition of instruments.

To accomplish this, in many cases we need a utero-ovarian sedative and anodyne, of guaranteed strength and value as to ingredients; and this may be found in the liquor sedans of the well known chemists, Messrs. Parke, Davis & Co. The importance of this remedy can hardly be overestimated in the treatment of a great majority of the gynæcological cases coming under the care of the general practitioner or specialist.

This combination of remedies has been found of much value, and may be given in drachm doses, repeated as indicated. Each fluidounce represents: Black haw 60 grains, golden seal 60 grains, Jamaica dogwood 30 grains, combined with aromatics.

Dr. Reynold W. Wilcox, Professor of Clinical Medicine in the New York Post-Graduate Medical School and Hospital, recently presented an elaborate report of many cases in which this formula proved most serviceable.

A careful study of medical literature for the past few years will show the great importance ascribed, by many medical writers, teachers, and practitioners, to black haw (*Viburnum prunifolium*) in regulating uterine function. The specific action of golden seal (*Hydrastis Canadensis*) in catarrhal conditions of the genito-urinary tract, aud the well known anodyne and sedative value of Jamaica dogwood (*Piscidia erythrina*), and its freedom from the distressing after-effects of opium preparations, will suggest the use of liquor sedans in ovarian irritability, and irregularity of the uterine functions, which perpetuate local inflammation.

Associating with such a remedy hygienic rules, out-of-door exercise, and, so far as possible, relief from over-fatigue and worry, we will find patients improving both in body and mind; and likewise will derive the greatest benefit in realizing that we have done our duty and accomplished a cure without the use of the instruments and appliances the bravest women must shrink from. There is much of value for all concerned in conservative gynæcology.

Salem, Mass.

SURGICAL TREATMENT OF PERI-TYPHLITIS AND OF ILIAC PHLEGMON.

BY E. P. HURD, M. D.

At the meeting of the Society of Natural Medicine, held in Berlin, January 5th, 1891, Sonnenburg spoke of the surgical treatment of peri-typhlitis, and of iliac phlegmon. He has operated twenty-two times for peri-typhlitis, and with the exception of one case, always noted the presence of pus. He does not conclude from this that it is necessary to operate on all patients affected with peri-typhlitis, nor does he believe that by an

operation all cases may be saved; but that there is a group where surgical interference is urgently demanded. When, in fact, one succeeds in making an early diagnosis of circumscribed suppurative peri-typhlitis, it is plain that it is necessary to act according to the same principles as govern the treatment of suppuration generally.

Peri-typhlitis proper always gives rise to the formation of an exudation *foyer*, which is either serous, or sero-fibrinous, or purely purulent, or purulent and septic. Sero-fibrinous foci, which have their seat about the cœcum, are in general resorbed, and never produce a generalized peritonitis.

The cause of the disease is almost always constipation. When in an individual previovsly well, an iliac tumor is found which is badly defined, the seat of shooting pain whose volume augments rapidly, the probability is that the swelling is of a sero-fibrinous character. But in persons already sick, especially in those who are troubled with acute or chronic tuberculous affections of the intestine, such a *foyer* is rapidly transformed into an abscess by perforation of the intestine, although often it is the inflammation of the appendix vermiformis which determines the perforation, whether by coproliths, by the formation of tuberculous ulcers, or by gangrenous process. The pus of these abscesses is seldom or never resorbed.

For the diagnosis of purulent foci, it has been remarked that, the larger the swelling at first, the less likely it is to be an abscess originating in the appendix, for it is precisely the small tumors, circumscribed at the onset, situated above Poupart's ligament, that are ordinarily consecutive to inflammation of the appendix vermiformis.

In the second place, the more the symptoms indicating iliac phlegmon are alarming, the more probable it is the case is one of appendicitis with abscess. In fact, seeing that in most cases it is a coprolith which causes either the perforation or the gangrene, it is not strange that the initial symptoms of phlegmon should be very intense, and manifest themselves suddenly.

As soon as the surgeon is satisfied of the existence of suppuration, he should not delay, as there is danger of the pus making irruption into the cavity of the peritoneum and causing a general peritonitis. When, by palpation, fluctuation is detected, an exploratory puncture is made by the trocar, or aspiration needle, and if pus is found, a free incision may be made and it evacuated. But if there is only one little *foyer* which is not distinctly palpable, the operation must be done in two stages.

An incision is made in the abdominal wall the second, third, or fourth day of the disease; this incision stops short of the peritoneum, which is not incised till the fifth, sixth, or seventh day after having perceived fluctuation, and after determining by the aspirator that there is an abscess. This method has in its favor, that the abscess, often of itself, points in the wound made in the abdominal walls, *i. e.*, on the side where the resistance is the least; moreover, it has the advantage of favoring adhesions between the peritoneum and the abdominal wall.

Sonnenberg makes his incision in the form of an arc, as in the operation for tying the common iliac artery, and as near the crest of the ilium as possible. After having divided the aponeuroses and the muscles, the peritoneum is exposed by means of the finger or blunt instruments, and, after having noted by palpation the seat of the tumor, the wound is stuffed with antiseptic cotton. The next day the bandage and dressing are removed, and the swelling punctured. Matter is drawn off daily by the trocar till it is found there are adhesions between the peritoneum and abdominal wall, when the abscess is opened by the Paquelin cautery. Ordinarily, with the pus, a coprolith or something like it, is evacuated. In the cavity of the abscess the appendix is detected, firmly adherent to the surrounding parts. A drainage tube is inserted in the abscess cavity, which is gently washed out every day, and at the end of four or five weeks the cure is obtained. Sometimes a small fistula remains, which gradually heals.

All patients in whom the invasion of the affection took place with alarming symptoms, and who presented a small *foyer*, with difficulty accessible, have been operated on by Sonnenberg in this way, and with the best results; if he had waited for fluctuation, the patients would certainly have died

from septicæmia before perforation had taken place. Out of twelve patients affected with iliac phlegmon, five succumbed to septicæmia, with which they were already attacked when he made the incision.

Relapses consecutive to the operation are rare. Well-drained abscesses get well perfectly, but it is not the same when the abscess evacuates itself by spontaneous evaporation. The residua of these abscesses may give rise to new symptoms, even after several years. The treatment of relapses is much more difficult by reason of the great number of cohesions which are met with in all directions. In these cases, it is no longer possible to perform the operation in two stages. The ideal for the surgeon is to make resection of the appendix, but this is rarely possible; Sonnenberg has succeeded but once.

The indications of surgical treatment of iliac phlegmon are summed up as follows:

1. It is necesary, by all possible means, to seek to differentiate sero-fibrinous *foyers* from the purulent form of peri-typhlitis. Sero-fibrinous foci, in the neighborhood of the cœcum and colon, however voluminous they may be, undergo resorption in most cases in individuals who have good health, and do not need surgical treatment.

2. It is necessary to operate in cases of purulent peri-typhlitis originating in the appendix, for absorption of pus is never effected.

3. The nearer the surface a *foyer* is recognized as purulent, the sooner the operation is demanded. In such cases, a simple incision will suffice, because there are already adhesions. When the surgeon waits for the moment when the abscess points externally, or toward the intestine or bladder, the incision cannot longer guarantee the patient against septicæmia.

4. The deeper the abscess and the more indistinct its limits, the greater the indication to perform the operation in two stages, for experience proves that one may succeed in giving vent to pus in this way without danger of generalized peritonitis.

At the same meeting, Fräenkel stated that the typhlitis which depends on chronic constipation, is much more frequent than the peritonitis consecutive to perforation of the appendix vermiformis, for without that, the success of expectant medicine would be inexplicable. In general, perforation is consecutive to the penetration of fæces to the appendix, these fæcal matters are transformed into concretions of the hardness of a stone, and determine ulceration. Perforation generally takes place after the formation of adhesions. From what he had seen at autopsies, he judged the quantity of pus which forms in such cases is inconsiderable.

Perforation is followed either by a diffuse septic peritonitis, or by an inflammation which terminates by the development of an abscess.

To make the diagnosis, an exploratory puncture is necessary, but only in the event of there being no coil of intestine in front of the tumor. The diagnosis is more difficult when the abscess develops behind and below in the direction of the pelvis; in these cases it is necessary to effect exploration by the rectum and vagina.

He has observed a particular termination of these abscesses. The pus burrows behind in the retro-peritoneal cellular tissue, finds its way up to the diaphragm, and points into the pleural sac or lungs. He has seen two cases of this kind; the first was verified at the autopsy, the second got well.

Relatively to treatment, he formulates the following:

1. As in most cases of peritonitis consecutive to perforation of the appendix vermiformis the formation of pus is not observed, the treatment should be essentially medical—expectant and opiates.

It is not best to make the operation in two stages, because it cannot with sufficient certainty protect the patient from diffuse peritonitis.

2. It is best to operate in cases of diffuse peritonitis, if the diagnosis has been established early, because without operation the patients always succumb.

3. If there should be relapses, the proper treatment varies with each particular case.

Dr. Paul Gottman thought that many cases of mild typhlitis were not diagnosticated, and that, in general, 95 per cent. of cases of peri-typhlitis get well. He has observed, in eleven years at the Moabit hospital 96 cases of iliac phlegmon; five only succumbed, and there would have been as many if he had operated each time.

There was one point on which he disagrees with Dr. Sonnenberg. The latter believed that if perforation of the appendix took place, there would be formation of pus. He has seen, in phthisical cases, a tuberculous ulceration of the appendix without a single drop of pus forming in the vicinity of the appendix. Once, even, he observed in a phthisical patient, rupture of the appendix without consecutive abscess; death was so rapid that the latter had not time to form.

He believes that out of the 95 per cent. who get well, there are some that have had perforation of the appendix. It is true that in these cases there is formed a *foyer*, a tumor, but he does not believe that this tumor is always purulent; it is more likely fibrinous.

Some imagine they have observed recovery to follow on simple puncture; but he does not believe it possible by this means alone to evacuate all the pus, and much prefers the incision to the trocar.

Dr. Leyden said that surgical interference is not called for in all cases of iliac phlegmon, but only when there are voluminous *foyers* whose spontaneous evacuation might be dangerous, or if there exist alarming symptoms, signs of strangulation, etc.

Before all, it must be remembered that 95 per cent. get well by expectancy, and that the presence of a coprolith is not as frequent as has been taught down to the present time. Such foreign bodies are found in only about a third of the cases that are made the subjects of operation; moreover, there are other causes of ulceration of the appendix.

In his service, he often makes an exploratory puncture, following by incision. He makes the diagnosis of iliac phlegmon, only when he perceives a distinct *foyer*.

In some cases resorption takes place spontaneously; if this is slow to be effected, it is best to puncture, then incise.

In the United States, several cases have been published of return of iliac phlegmon, which have finally been cured by resection of the appendix. But this operation is one of sufficient danger to warrant great deliberation on the part of the surgeon who proposes to perform it.

In several cases which he has witnessed, the return of the phlegmon was due to the presence of an encysted coprolith. Under these conditions, it is not surprising that some day the coprolith should cause perforation, and that the patient should succumb to peritonitis. Nevertheless, it is not always easy to convince the patient, in such cases, of the necessity of an operation.

Newburyport, Mass.

THE RELATION OF THE PHYSICIAN AND THE SURGEON IN THE CARE OF CASES OF APPENDICITIS.*

BY A. VANDERVEER, M. D.

In the study of the classification of the subject now before us, I have observed that in the pathology, the indications for early laparotomy, the *technique* of operative interference, the indications, etc. for operation during the quiescent stage of appendicitis, the papers presented have been by surgeons who are known everywhere as the ablest of operators. No physicians have been called upon to present their views as to diagnosis —early, prompt—which to my mind is often something more than the first step in saving the life of the patient. The cases must necessarily, in the vast majority of instances, first come under the observation of the physician,—the medical attendant, not the prominent operating surgeon of that city, village, or surrounding country.

The subject assigned to myself is one that, I must say, has impressed me very earnestly. (I take it that the care of cases of appendicitis dates from the time the medical attendant is first called in to the case.)

The amount of literature that has accumulated during the past ten,—yea, the past five—years, upon the subject of appendicitis, has been very great. The word itself, as so ably presented by Dr. Fitz in his excellent paper, has helped much to simplify cases originating within and about the appendix. Were it possible, when this discussion is closed, I would like an answer from the gentlemen who have preceded me, as to the question what proportion of the cases to which you have been called in consultation, were properly diagnosed by the attend-

*Remarks made at the meeting of the Medical Society of the State of New York, Albany, February 3d, 1891, in the discussion on "Appendicitis."

ing physician? My own impression is, from the experience which I have had, that these cases are being studied by physicians, many of whom never do any operative surgery, with greater care and determination to reach correctness in the early diagnosis. This I consider one of the cheering indications in our present study of the subject. It must be plain, I think, to everyone, that the good results following the present treatment of cases of appendicitis, has been largely due to the wise and judicious advancement made by operative surgeons; and while they have much to do with presenting the literature of the subject, together with their cases, yet it is to be said to the credit of the physician, that he has studied their methods and ways carefully, and has appreciated the importance of an early and correct understanding of the case. Still, much is yet to be accomplished.

In the discussions upon this subject, wherever they occur, it will be observed that these cases are no longer classified by the physician as obstruction of the bowels simply. They, in common with the entire profession, have learned to know that an early and careful analysis of the symptoms present, enable us, in the majority of cases, to identify these serious lesions. This is wise, and is a point for which we have reason to be profoundly grateful, especially in such cases as are of the acute variety, in which death is known to result at the end of seventy-two hours, or sooner unless prompt relief is afforded within the first thirty-six or forty-eight hours. This may be said to be the case regarding such conditions as the relapsing chronic form of appendicitis. Here the care of such cases rests largely with the physician, for when his patient has passed through one or more suspected attacks of this kind, then the responsibility weighs upon him very greatly, and he calls in his consulting surgeon, and at this point responsibility becomes mutual.

I would say then:

1. That the care of cases of appendicitis, so far as the physician is concerned, consists in his early and prompt recognition of the case. That abdominal surgery has now advanced to a point, and reached such a degree of success, by the application of methods of diagnosis by exclusion, the physician, is able to narrow down the possible condition of his patient to such point, that sharing the anxieties of the case with the operative surgeon becomes an imperative and immediate necessity.

Surely every physician has much reason to feel grateful to such surgeons as Weir, Edebohls, and McBurney, for bringing to his attention such plain and useful diagnostic points as they have. There is no excuse for any physician, now in full practice, for not knowing and fully understanding what is meant by "The McBurney point."

2. That, when called, the responsibility rests largely with the surgeon, to further aid or decide as to diagnosis, and as to the necessity of immediate operation. If it is once decided to operate, then the *technique* of the operation, and the care of the case for a certain period, devolves entirely upon the operating surgeon. It must be remembered that these cases often occur among a class of people where the anxiety is of the greatest, therefore, the physician and surgeon should join efforts early in the case.

3. That at no time after the surgeon is called in and operates, should the physician and he be separated in their care of the case. The watching of the wound rests with the surgeon. Should he be in doubt as to the necessity of an operation, he may be impressed more positively in the direction of the necessity of doing it later, if he sees the patient again at the end of twelve or twenty-four hours, or more or less frequently.

4. That the physician has yet much to grasp in the recognition of these cases as cases of great anxiety, there can be no doubt.

A case of this kind occurred recently in a neighboring city in which the operating surgeon was called in at the end of the second day's illness of the patient, and after careful examination, remarked he had no doubt of the condition being one of appendicitis; and, when going over the symptoms carefully, the attending physician said, "when we compare this attack with one the patient had some months since, I am confident they are both of the same nature;" thus confirming not only his own, but the surgeon's (Dr. W. H. Hodgman, of Saratoga) diagnosis and opinion of the necessity of an immediate operation, which was done. The appendix was found

full of pus just ready to escape. The patient's life was saved, but had the attending physician waited another twenty-four hours to call in the operating surgeon, it would probably have proved fatal.

5. I am convinced that there is a great duty resting with operative surgeons in endeavoring to classify cases of abdominal surgery in such a way as will make it clearer to students, and practicing physicians, to recognize these cases, and then to endeavor to bring before the older members of the profession an array of statistics, a percentage of recoveries, that will impress them with the importance of prompt operation in these cases.

To illustrate: Not long since, I was called to see a case in which a young physician, who had seen the case casually, suspected appendicitis, and suggested the propriety of an operation to the older practitioner in attendance; and the latter said in reply: "Well, granted that it is that, and I believe you are correct, have you ever known of a case that recovered after an operation for removal of the appendix?" This has been too often the experience of our middle-aged and older practitioners; therefore, I repeat, it is our duty to endeavor to bring this subject, by constant study, by repeated discussion in our societies, by careful observation of our pathological specimens, to that point of perfection that we may be able to convince the pure, upright, honest, and intelligent physician, that the operative surgeon can help and save these cases, when presented to him in time for treatment.

6. The mutual care of these cases must consist in a greater, closer, watching of early symptoms by the physician, and of a greater degree of confidence in the skill of operating surgeons. The care of these cases, as between physician and surgeon, must be brought to that plane where we shall meet with fewer cases of septic condition when operating, and where the symptoms of collapse, such as cold hands and feet, husky voice, sub-normal temperature, and like conditions, have not been reached.

28 Eagle Street, Albany, N. Y.

PYO-SALPINX IN RELATION TO STERILITY IN WOMEN.

BY DR. CHAS. P. NOBLE.*

The relation of inflammatory disease of the uterine appendages to sterility in women, as cause and effect, is becoming more generally appreciated. That it is one of the most important causes of sterility none will deny. Fortunately, also, the explanation of sterility from this cause is easily given: It is due to a closure of the fimbriated opening of the tube by plastic exudate, or to stricture in the lumen of the tube, which prevents the meeting of the ovum and spermatoza. If the diseased condition exists in both uterine appendages, and both tubes are occluded, the woman is sterile. Most observers will be willing to admit that she is permanently sterile, and that the uterine appendages are no longer useful organs. The difficulty in arriving at this conclusion lies in diagnosticating the exact condition of the uterine appendages, by the ordinary means at ones command. In nulliparous women, sterile from inflammatory disease of the uterine appendages, the desire for children is frequently the reason for consulting the physician. Under such circumstances, positive knowledge concerning the possibilities of conception will be of much value.

It has been stated that pyo-salpinx is always a bi-lateral disease, or at least that when pyo-salpinx exists upon one side, salpingitis with strictures of the lumen of the tube will be found on the other side. That this is usually true, I believe, but it is not invariably so. In support of this statement I shall report two cases, and exhibit the specimens removed by abdominal section, and also make reference to other cases coming under my notice. The point which I shall establish thus, is of very practical interest from several points of view. It shows:

1. That pyo-salpinx is not necessarily a bar to conception:

2. That pyo-salpinx, discovered after a given labor, may have existed prior to the pregnancy, and not be of recent origin. This second fact is of special interest, be-

*Surgeon to the Kensington Hospital for Women, Philadelphia.

cause of its bearing upon the causation of certain cases of so-called puerperal fever. A pyo-salpinx existing during pregnancy may be ruptured during labor, and set up purulent peritonitis—a variety of what has been styled autogenetic puerperal fever.

These considerations suggest the query: Is it desirable that pregnancy should occur, when serious inflammatory disease (such as pyo-salpinx and abscess of the ovary, or hydro-salpinx, of course limited to one side) of the Fallopian tube or ovary exists? In view of the possibilities of rupture of the sac during labor, with resultant peritonitis, even the most ardent advocate of fecundity in women will be obliged to answer, No.

What then is the physician's duty when consulted by a sterile woman, anxious for children, who has a pyo-salpinx or other serious inflammatory disease of the uterine appendages! To advise the removal of the diseased organs which are functionally useless, a detriment to health, and a menace to life. But if the disease be unilateral, what is to be done? If the diseased uterine appendage be removed and the healthy one left, life may be saved, health restored, pregnancy result, and all go well. Unfortunately, however, experience has shown that when the healthy ovary and tube upon one side have been left, inflammation is likely to supervene, and subsequent operation for their removal be required. This is said to be true, especially in cases of gonorrhœal salpingitis. In view of all the facts, it occurs to me that it is wise to explain to the woman the anatomy and physiology of the parts; the danger to health and life of salpingitis in its various forms; the impossibility of conception taking place through an occluded tube; the danger arising from pregnancy and labor should one tube be healthy and the other diseased; and to recommend operation for the removal of the diseased organs. If a healthy tube and ovary be left after operation, I think the woman can be told that pregnancy will be more likely to take place than if she possess a diseased ovary and tube as well. The possibility of the later occurrence of salpingitis having been explained to her, the woman should be permitted to choose whether she will run the risk in the hope that thereby she may be able to bear children. That this is possible, one of the cases to be reported, will show.

When seriously diseased uterine appendages are removed, such as cases of pyo-salpinx, hydro-salpinx, and hæmato-salpinx, the question of sterility or fecundity has no bearing on the case, as pregnancy with such organs is so remote a possibility as to be beyond computation; the removal of the uterine appendages renders a woman sterile only when healthy organs are removed.

The first case which I shall report demonstrates the possibility of having a patulous tube on one side, and a pyo-salpinx on the other. The left Fallopian tube of this woman contained a pint of pus. The history indicates the occurrence of two, if not three, pregnancies during the course of the salpingitis.

Mrs. X., aged 36 years, had two children, aged 16 and 8 years, and one miscarriage at the second month, six months after the birth of the first child. She was always well until her marriage, at the age of 20. At the first period after her marriage she had "acute ovaritis." In this connection it is interesting to know that her husband had had gonorrhœa, followed by gleet, for 18 months, but was pronounced well some months before marriage. Sixteen months after marriage, a girl baby was born spontaneously. Child-bed fever of mild type followed, which kept her in bed four weeks. She has never been well since. Three months after labor, an attack of salpingitis put her in bed for six weeks. Three months later still, she miscarried at the second month. Within seven years she had six attacks of pelvic inflammation, each one confining her to bed from four to six weeks. When the first baby was five years old, an abscess discharged per vaginam, after which she was better for a time, and conceived again. During the past seven years, after the birth of the second daughter, she has had three attacks of pelvic inflammation. Menorrhagia, metrorrhagia, dysmenorrhœa, etc., have been almost constant. She has been in bed, or lying around, two-thirds of the time for sixteen years.

I saw her first in May, 1889; diagnosticated pyo-salpinx, and advised operation. She was greatly prostrated and emaciated, being un-

able to walk. She was operated on at the Kensington Hospital for Women, June 19th, 1889, and a huge pyo-salpinx containing a pint of pus was removed. The ovary and tube, removed from the right side, were thickened by chronic congestion, but the tube was patulous. A slow convalescence followed, due in part to an inflammation about the left pedicle. Mrs. X. is now relatively well, having gained many pounds in flesh.

The second case also illustrates the occurrence of pyo-salpinx with all the involvement of the uterine appendages. A huge acute pyo-salpinx and abscess of the ovary existed on the right side, and the left ovary and tube were perfectly healthy. The healthy appendage was not removed, and the woman is now, one year after the operation, eight months pregnant.

Mrs. Y., aged 23, has always been well until she aborted, at the third month, on November, 1889. The physician in attendance stated that the ovum was putrescent. He emptied the uterus manually, but used no measures for the disinfection of the birth canal. She had no further medical attendance. Symptoms of pelvic inflammation slowly developed, and seven weeks later when I saw her, she was profoundly prostrated, suffering with fever, sweats, and anorexia. Examination showed a fluctuating mass connected with the right horn of the uterus, which filled nearly the whole pelvic cavity.

This patient was operated upon *in extremis*, January 2d, 1890. The pulse at the time was 150, the temperature 105° F., the skin leeky, and the face anxious. There was no indication of spreading peritonitis; the condition was plainly one of septic intoxication. When the exploring finger was introduced into the pelvis and the mass touched, pus gushed forth, and a large part of an ovarian abscess-sac floated up. An immense tube, of a calibre, in places, of an inch, and six inches in length, was now tied off. In view of the condition of the patient, it was considered unwise to prolong the operation in order to enucleate the remaining portion of the right ovary. Thorough irrigation followed, and the drainage tube was placed behind the right broad ligament.

As the left tube and ovary were healthy, they were not disturbed. The woman grad ually, but steadily, improved, and is now in good health; and eight months pregnant.

A case illustrating the possibility of pregnancy during the existence of a pyo-salpinx, came under my care in the spring of 1889. I was called to see a woman who gave a history of pelvic inflammatory attacks, extending over some years; also a history of probable pregnancy of three or four months. Some weeks before she had visited a physician, representing that she had "caught cold on her monthlies," and received local treatment. From the woman's statement, I believe the sound was introduced and an intra-uterine application made. From that time she began to bleed and have pelvic pain, fever, and vomiting. On examination, I found the pelvis filled with a mass, the cervix pushed forward and upward against the pubes, great pelvic congestion, and universal tenderness. Afterward, under ether, I satisfied myself that the cervix and pelvic tumor were continuous, and diagnosed pregnancy in a retroflexed and adherent uterus, complicated by tubal inflammation on the right side. In the hope that the woman would abort, or that pregnancy continuing, the adhesions would stretch and the uterus rise into the belly, a temporizing policy was adopted. Later, I made up my mind to induce an abortion, but was dissuaded by a medical friend. Thus two months went by, and the abdomen began to enlarge, the pelvic conditions remaining the same. Careful examination failed to reveal fœtal heart beats, or the rhythmic contractions of the pregnant uterus. The absence of the fœtal heart sounds could be explained on the supposition that the fœtus was dead. In that case, however, it was difficult to understand the continued growth of the mass. The absence of the intermittent uterine contractions made me hesitate concerning the diagnosis, which I came to regard as very doubtful. The case passed into other hands, and later the abdomen was opened upon the supposition that the mass was an ovarian tumor, the uterus tapped, and a living seven months fœtus extracted. Everything was found matted together, and the patient becoming collapsed, the uterine incision was closed

and nothing further attempted. She died some hours later. At the post-mortem, a tumor of the anterior wall of the uterus was found, also a pyo-salpinx on the right side; the pelvic and abdominal viscera were universally adherent. This case has many points of interest. The fœtal heart was not heard, because the fœtus was packed in the pelvis and behind the tumor of the uterus. (The vaginascope might have cleared up the diagnosis.) The intermittent contractions of the uterus could not be felt because the fundus of the uterus was in the pelvis, and because the tumor of the uterus was anterior. From the standpoint of diagnosis the case was certainly obscure, and I consider the error in diagnosis no reflection upon the surgeon who operated.

The case is reported as a pregnancy occurring in the course of a pyo-salpinx.

Still another case came under my notice during the year. A colored woman, living in West Chester, was confined, and immediately developed an acute purulent peritonitis, and shortly died. At the autopsy a ruptured pyo-salpinx was found. The case was communicated to me by the physician in charge, and undoubtedly the pyo-salpinx antedated the pregnancy. The details of the case have escaped my memory.

The object of this paper is to demonstrate from the data published:

1. That serious inflammatory disease of the uterine appendages, including pyo-salpinx, may be unilateral; and that pregnancy may occur during the course of the disease.

2. That when pregnancy follows palliative treatment in any case of salpingitis, it does not follow that the treatment, whether electrical or medicinal, has rendered the tube patulous, because the ovum may have descended a healthy tube on the opposite side.

3. That pregnancy adds greatly to the dangers attending pyo-salpinx, or other serious inflammation of the uterine appendages, and hence is to be avoided during the existence of such disease.

Philadelphia, Pa.

HYSTERIA CAUSED BY LUMBRICOIDS.

BY W. C. GATES, M. D.

Wednesday, July 16th, 1890, I was called to see Mrs. L., German, æt. 22; mother of one child, born in April, 1889. She had been very sick for several months before confinement, and during labor three physicians were in attendance. Instrumental delivery, caused a severe laceration of perineum, which was repaired at once, with union by first intention.

She had no trouble from that time until I was called in July. She was then in advanced pregnancy, the abdomen being very large, and believed pregnancy to date from the Christmas before, as her husband was "home from the woods a few days at that time." She had a slight hæmorrhage the 25th of March, which she thought was the result of a fright produced by a fire. Her husband came home March 26th. She thought that she had felt quickening in April, and after.

The Saturday before I saw her, while berrying, she accidentally fell over a log. This brought on considerable pain in the abdomen and she had much difficulty in getting home; was in constant pain and occasionally vomited, from that time until I saw her.

I found pulse, temperature, and respiration, normal. She referred all her pain to the uterus, but there had been no hæmorrhage and no dilatation. There appeared to be partial spasmodic contractions, or twitchings of the uterus, but no firm, systematic contractions of the entire organ. I ordered drachm doses of fl. ext. viburnum prunifolium (P., D. & Co.'s), and rest in bed. I called again in the evening, and found the pain and vomiting had increased, but still no dilatation of the os. I at once gave by hypodermatic injection, one-fourth grain morphine sulph. combined with atropia, and one hour later (as I saw no effect of the morphine), chloroform by slow inhalation. She felt relieved at once and went to sleep, awakening about three hours after with a severe spasm and vomiting spell, and had more or less pain and light spasms throughout the night, vomiting at times.

I called again Thursday morning and tried calomel, ipecac, etc., unsuccessfully, for the

vomiting. The urine was high colored and showed excess of urates and phosphates; sp. gr. 1.028; no albumen. I gave bromide of sodium, potassium, and ammonium, equal parts, twenty grains of the mixture every two hours. I was called hurriedly, at about 4 P.M., and found the pulse, which had been strong and full up to that time, scarcely perceptible at the wrist. Respiration had failed and the patient was livid. I started artificial respiration and kept it up for half an hour, giving stimulants, spraying chest with cold water, etc.

J. P. Jordon, M. D., of Ontonagon (twelve miles distant), was sent for, in consultation. The patient was some better before he arrived. He thought the spasms hystero-epileptoid, and possibly due to a pinched ovary. We placed the patient in Sims' position, with the hips well elevated, causing temporary relief. He also suggested oxalate of cerium for vomiting, and spray along spine with ether for spasms. There was no spinal tenderness. I tried the cerium, without success, but could not use the ether at night. I staid with the patient all night. The pulse was strong and full. Respiration, at times all right, again shallow and very irregular. She laid in a lethargic state, from which it was impossible to arouse her, and at intervals of half an hour, or so, would have light spasms attended with vomiting. Early in the morning, I sprayed the spine with ether, and applied mustard plasters, one inch square, to the cervical, dorsal, and lumbar regions respectively. The effect was magical, pain, spasms, and vomiting ceasing. In a few moments she opened her eyes, and asked for something to eat. Said she felt as well as ever except for weakness. The spine was sprayed several times through the day.

In the evening, all the symptoms came on again, more severe than ever, the pain being referred to the uterus. In about an hour she was taken with a very severe vomiting spell, and raised eleven large lumbricoids, after which she felt very much better. I at once gave her:

℞ Santonini, gr. v.
Hydrarg. chlor. mitis., x.
M. Sig.—Take at once.

The next morning she passed seventeen lumbricoids. She was very weak, but felt well otherwise. I gave her the following, with instructions to call me if she had any more trouble:

℞ Santonini, gr. xv.
Hydrarg. chlor. mitis., gr. xxx.
Sacch. lac., q. s.
M. Div. pulv., No. v. Sig.—One at bed-time.

She passed several worms each morning for nearly a week, but was up and doing her house-work in a day or two. Four weeks later, she had an attack similar to the above, and I tried ether spray, blisters, position, viburnum prunifolium, etc.; but all seemed to aggravate her condition, rather than improve it. Finally, I gave a large dose of santonin and calomel, and the next morning she passed another knot of lumbricoids, and her trouble was over.

Four weeks later she had a similar attack, with like treatment, and result. At each attack, she thought her trouble was child-birth, but afterwards changed her mind in regard to time of conception. I was called to see her again January 3d, 1891, and never have I seen a woman with abdomen so greatly distended. She was suffering from a severe facial neuralgia, and some pain in the uterus. I extracted five badly decayed teeth, which immediately freed her from pain.

Monday evening, January 5th, I was called again, and found she had been having light pains since noon. The os was dilating slowly. I gave morphine sulphate hypodermically. At 10 o'clock the cervix was fully dilated, but I could not touch the child except by crowding it firmly down into the pelvis, and holding there by pressure on the abdominal walls, while I introduced the other hand into the vagina, and two fingers in the uterus. By so doing I could just touch and recognize the head. I ruptured the membranes, and but little water came away. I waited until midnight, and, in spite of all efforts to bring on contractions, there was no change in her condition. She complained constantly of sharp lancinating pains all through the abdomen.

I crowded the child down into the pelvis as firmly as possible, and asked the nurse to hold it there while I applied the forceps. I could apply one blade without difficulty, but

before I could apply the other, the head would slip forward out of reach of both finger and forceps. After several trials I succeeded in getting the forceps on. I have Elliott's long forceps, and after they were locked the handles were wholly within the vagina. I drew the head into the pelvis without difficulty. Very light pains came on, and the child was delivered at half-past 3 A.M., in the right occipito-posterior position. It was in a moribund condition. I cleared the mouth and throat of fluid, and started respiration. In a few moments it was crying feebly. I gave it to the nurse, with directions to wrap in warm flannel and hold by the fire and warm thoroughly.

The mother was flowing freely. I at once delivered the placenta without difficulty, but only by constant manipulations of the uterus could I keep it contracted until I obtained the effects of ergot, given as soon as the placenta was delivered. I then turned my attention to the child. The nurse had wrapped it in a cold cotton sheet, covering with a blanket and overcoat in a chair, at some distance from the fire, and it was dead when I found it. The mother made a good recovery.

I attribute all her trouble during the summer to the lumbricoids, as I have known them to produce serious symptoms in other patients. During the seven months following the above case, I treated nearly all the children and many of the adults of this place, successfully, for lumbricoids.

To one—a puny, sickly child of two years, —who had suffered all summer from frequent attacks of diarrhœa and vomiting, alternating with convulsions, which nothing seemed to relieve, I gave:

℞ Santonini, gr. ij.
Hydrarg. chlor. mitis, gr. iij.
Sacch. lac., q. s.
M, Sig.: Take at bedtime.

The powder was taken at 8 P.M. About midnight the child was taken very sick, and after an hour of severe straining, passed a large knot of lumbricoids, and continued to pass them for half an hour, passing 42 all told, the longest 19½ inches. A month later I hardly knew the child, as it had become fat, plump, and healthy.

Rockland, Mich.

Correspondence.

REGULATION OF THE PRACTICE OF MEDICINE IN MICHIGAN.

The Editor of the AGE takes pleasure in publishing the following appeal by the Committee on Medical Legislation in Michigan, and in commending, in the editorial colums of this issue, the cause which every reader can not but be interested in: The proper regulation of the practice of medicine:

DEAR DOCTOR:

The Committee on Medical Legislation in Michigan has been compelled to depart from its original plan, as stated in a preliminary circular, in so far as the legal authority of the Examiners is concerned. The reason for this is the unconstitutionality of any act that would permit the profession as a whole to organize and manage the regulation of the practice of medicine. Hence it was necessary to devise a plan in accord with our constitution. After much study of the entire subject, in all relations the Committee decided upon a Bill, substantially the same as that which has been in operation in Minnesota during the past four years. Montana, North Dakota, and Washington, have also adopted it. The history of its operation in Minnesota shows that it has exerted a beneficial influence alike upon the people and the profession. This Bill is now before the Legislature. Its salient features are:

1. No person can practice medicine without securing a license from the State Board. All now registered will receive a license without examination, when this law goes into operation.

2. After the enactment of this law, licenses to practice medicine in Michigan will be granted on examination, diplomas not being recognized as conferring the right to practice medicine.

3. The Board is composed of nine physicians appointed by the Governor. None of these can be connected with any medical school.

4. Only those are admitted to examination who have been graduated at a medical school requiring a preliminary examination sufficient to enable the student to enter upon the study of medicine understandingly, and requiring attendance upon three courses of lectures of not less than six months each.

5. All examinations and other acts of the Board will be open to the inspection of the profession and the public

6. The expense of this work is to be met

mainly from the fees of those desiring the license of the Board.

It is believed that, if enacted, this Bill would prove satisfactory to all intelligent persons. In view of this fact, every such person, in or out of the profession of medicine, is asked to exert his or her influence with the Legislature, and especially with such members as can be most conveniently reached, either personally or through their friends.

By order of the Committee.

DONALD MACLEAN,
Chairman.

GLONOIN IN GAS ASPHYXIA.

Having read in THE AGE of July last, an article on the use of glonoin or nitro-glycerin in gas asphyxia, I wish to add my testimony to its efficacy in these cases. I have treated five cases of asphyxia from gas, in the last four of which I employed glonoin. The first case treated was that of a woman of 40 years. I used all the usual methods in vogue for five hours, and then sent her to the county hospital for better nursing. There all that could he done in her behalf was ineffectual, and she never regained consciousness, dying in ten hours.

The second case—that of two sisters—I found in as critical condition as the first. Having read of the use of glonoin, I gave each a hypodermatic injection of 10 drops of the 1 per cent. solution, and was gratified to see the rapid change of symptoms for the better. I gave but one injection, also used stimulants freely, and both girls resumed their journey five hours later. I have since treated three cases, was successful in all, and consider its effects wonderful.

I am confident its employment will save many lives that would certainly be lost by the old treatment heretofore employed.

W. H. VARY.

32 Wells Street, Chicago.

[Glonoin, it may be remembered, is a title from Homœopathic sources, and latterly has become practically obsolete. Trinitrin is the present official designation of nitro-glycerin, and universally recognized in scientific circles to the total exclusion of glonoin.

It will be of value to recall, in instances where nitro-glycerin may not be available, that amyl-nitrite, which has much the same physiological action, though in less degree, may possibly answer as a substitute in gas asphyxia. Severe and rapid exercise, rigidly enforced, may also prove efficient.—ED.]

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Editorial.

A BILL TO REGULATE THE PRACTICE OF MEDICINE IN MICHIGAN.

In another column, we publish a communication from Donald Maclean, Chairman of the Committee on Medical Legislation in Michigan, which presents the salient features of a bill now before the Legislature, providing for a State Board of Examiners who shall determine the fitness of physicians to practice, before licensing them to do so.

It is notorious that the existing laws in Michigan are totally inadequate to protect the public from the pretension and ignorance of the unqualified practitioner.

The difficulties in securing the enactment of laws, exacting definite standards of acquirements for those practicing medicine, are manifold. Any plan to be practicable must conform to the existing Constitutional laws.

The bill decided upon has been carefully framed, by the Committee on Medical Legislation, to meet present conditions, and its enactment is not an experiment, as it has successfully mitigated the evils of quackery in other States.

The bill deserves, therefore, the support of every Legislator who has at heart the public weal, and we think none can afford to forget, in considering a question of such vital interest to public health, the obvious duty of aiding the enactment of this proper law.

To this end, the Committee on Legislation appeal to every intelligent person, in and out of the profession, to exert their influence with the Legislature, and especially with such members as they can reach personally or through their friends.

RATIONAL ESTIMATE OF THE MEDICAL PROFESSION ON KOCH'S TREATMENT OF TUBERCULOSIS.

The first excitement and enthusiasm attending the announcement of Koch's discovery are over. Nothing in all the history of medicine has equalled the furor with which this announcement was received everywhere, nor was ever before such indulgence shown to any professional man who had the hardihood to keep profoudly secret the composition and mode of preparation of a remedy of possibly unparalelled value. It was at first affirmed that in "Kochin" the profession had an infallible remedy for lupus and all external forms of tuberculosis, and an almost infallible remedy for phthisis in its earlier stages.

The experience of the past three months has greatly dampened these high expectations. The world was first startled by Virchow's communication which evidently drove Koch into making a partial disclosure of the composition of his "lymph;" then came unfavorable reports from hospitals where trials were being made of the remedy in various tuberculous affections.

With regard to lupus, not only have there been many cases of death reported, but those who have had the best opportunities for forming an unbiased judgment, are doubtful as to the permanence of cure in any one case. Take, for instance, the experience of Kaposi, as related at the meeting of the Imperial and Royal Society of Vienna, Jan. 16th. Out of thirty-two patients affected with lupus, who had been the subjects of the new treatment, six were regarded as cured, but Kaposi stated that he had not much faith in the ultimate and permanent success of the injections. It must be borne in mind that the bacilli have an irritative or rather formative action; the lupus will be for the time arrested by the injections, then, as the bacilli remain in the tissues, it will break out again; new foci will form. This result had actually been witnessed in some of Kaposi's cases. "We turn" says Kaposi, "in a vicious circle. On the one hand we exercise a favorable action on the lupus by means of the injections; on the other the interruptions enable the lupus to continue its development, and as the bacilli cannot be evicted from their haunts, they may penetrate the lymphatics and provok metastases." He presented to the Society a patient who had been ameliorated by the treatment, then had presented new lupous lesions. The problem to solve, then, is to promote elimination in some other way, and the thermo-cautery curette, and caustic, are likely to be just as indispensable in lupus as ever. At the same meeting, Billroth made mention of two cases which exactly confirmed the conclusions of Kaposi. It must be remembered, moreover, as regards lupus, that this malady is prone to heal spontaneously, leaving no traces but a cicatrix, and yet assert itself again in the same spot, or elsewhere, after a more or less prolonged interval. In one case of lupus of the face, known to the writer, this interval was marked by months, and the recurrence established itself in the opposite side of the face, only to heal and break out anew at the seat of the original lesion. This alternating occurred several times, before the ulceration assumed dangerously active proportions.

With regard to the dislodgement of the bacilli from their haunts, and their penetration to other parts under the influence of the injections, this danger seems confirmed by the observations of Liebinan at the Hospital of Trieste. In nine patients treated at this hospital by injections of Koch's liquid for pulmonary or articular tuberculosis, this writer has observed without a single exception the presence of tubercle bacilli in the blood. He affirms that comparative researches have assured him that the blood of tuberculous patients, who have not been subjected to Koch's treatment, never contains these bacilli. If these results should be confirmed by other observers, it will be a new fact in support of that "mobilization" of the bacilli, which, according to Virchow, injections of Koch's liquid may produce in the tuberculous.

But Virchow, who is becoming still more a resolute opponent of the treatment, has followed up his thirty or more post mortem observations published early in January by others, which go more and more to show the danger of the injections. At a recent meeting of the Medical Society of Berlin, he showed some anatomical specimens from the autopsy of a man aged 54 years, who had

died at Charité Hospital from pleurisy with effusion, followed by an outbreak of miliary tubercles in the lungs, kidneys, spleen, liver; this outbreak was attended with intense fever, and was immediately consecutive to four injections of five milligrammes each of Kochin.

It is hardly too much to say that of all the cases of early phthisis which have been treated, there has not yet been a single case that can be pronounced as definitely cured. That marked improvement has apparently followed the injections in some cases, is of course admitted. Ewald, who has used these injections in 114 cases of early phthisis, and who is favorably disposed towards the treatment, insists that too much caution cannot be exercised in the choice of patients, and that death has undoubtedly, in many instances, followed the use of the remedy, where life might have been prolonged indefinitely, if reliance had been placed on other treatment. He points out the difficulty there is in deciding whether a given case of tuberculosis is benign or not; one cannot say what exactly exists in the lungs, and what effects will be produced. We should then, he says, before resorting to the Koch treatment, exercise toward our patients, the same reserve and suspension of judgement, a surgeon would manifest when about to perform a grave operation, the results of which are doubtful. He has, moreover, known cases which were apyretic before the treatment, and which, since the first injection have been attended with a continued fever, and aggravation of all the symptoms.

SHALL THE MICHIGAN STATE BOARD OF HEALTH BE ABOLISHED?

If there be one mission on earth nobler than all others, it is the prevention of disease.

Experience, common sense, public health, humanity, are unanimous in demanding the enactment of such measures as shall protect against the spread of devastating diseases.

Every intelligent individual must recognize the propriety of guarding, by proper sanitary restrictions, the general health.

The processes of evolution and of civilization have demonstrated beyond cavil the principle of the survival of the fittest. It follows that the individual, state, or nation, that fails to recognize the necessity of observing sanitary laws, deteriorates and is exposed to possible extermination.

The record of the work of the Michigan State Board of Health makes a grand showing of disease prevented and life saved.

Estimating this work on the material economic basis alone, this Board and its efficient allies save the State of Michigan, through lives preserved, over five hundred thousand dollars annually, while the expense of maintenance of the Board is a paltry fifteen thousand per year.*

We must believe, therefore, that any attempt to advocate the discontinuance of this important branch of public service, must react on those who counsel so radical and impolitic a departure from expediency and common sense.

It is a fad of the modern politician to endeavor to obtain a reputation for economy, from which political capital can be manufactured. It would be, however, a short sighted policy in any one aspiring for political glory, to aim so grave a blow at public health as to dispense with such a valuable barrier against disease, as exists in the State Board of Health. Rather let its usefulness be extended by voting more abundant funds to adequately prosecute and perpetuate its invaluable life saving functions.

LEGISLATION TO REDUCE DOCTOR FEES.

A proposition from one Smith, a delegate to the house of representatives of Missouri, to limit physicians' fees to the uniform rate of fifty cents for an office consultation, and one dollar for a visit, has naturally excited the disgust of the medical press of this state. The profession are justly indignant at this attempt to reduce their already meagre income. The editor of the Weekly Medical Review voices the sentiments of the physicians of Missouri in an earnest protest against fee cutting, and enumerates the already multitudinous wrongs of the medical practitioner. He says:

* Statistics in article by Dr. L. Connor, American Lancet, Feby. '91.

The physician is assailed from all sides. It is taken for granted that his lot is one of martyrdom to the cause—to humanity, which in return gives him no support, but directs its admiring gaze, grateful hearts and fulsome praise toward the quacks, charlatans and self-aggrandizers who abound in every locality.

Why is it that the practice of medicine is the only profession, or business, or mode of making a living which is supposed to be conducted universally on the credit plan? Is the merchant or the lawyer expected to give his goods or advice to an entire stranger, and receive the consoling assurance that it will be settled for at some future time?

The merchant may complain, with justness, of such business losses, but the physician never! He should be above any such mercenary thoughts. He should practice, should devote his time, his energies, his health, his life, for the love of his noble calling, and decidedly not for the money that is in it. That should have no place in his elevated plane of thought.

We believe that like the worm, the profession will turn—will become more business-like in its methods, will expect to know a little more of the likelihood of compensation for services about to be rendered, and will become less liable to relinquish just claims, in charitable submission to the pleadings of those who cannot afford to pay their doctor's bills, but can always afford to keep themselves supplied with whisky, beer or cigars.

The profession will turn; and it will take only a few such prods as that of the brilliant example of legislative asininity mentioned, to hasten the revulsion.

NATURAL GAS FIRES AND HEALTH.

George Hay, M. D., of Pittsburgh, calls attention, in the Pittsburgh Medical Review for February, to the dangers incident to burning natural gas. As Pittsburgh has had ample opportunity of testing the utility and the disadvantages of natural gas, Dr. Hay should be able to speak with authority as to its relations to health. He describes the character of natural gas, the dangers of its respiration, and calls attention to some methods, or appliances, employed in its combustion which result in charging the atmosphere with poisonous products, sometimes fatal.

Natural gas is, for all practical purposes, what is known to miners as *fire-damp*, and to chemists as marsh gas, light carburetted hydrogen, or methyl hydride.

One volume of marsh gas in burning consumes two volumes of oxygen, and produces one volume of carbonic acid and two volumes of water vapor. Therefore, if the stove consumes 10 cubic feet of natural gas per hour in a room containing 1,000 cubic feet of air, there are thrown into the atmosphere of that room 10 cubic feet per hour of carbonic acid and 20 cubic feet of water vapor. But the 10 cubic feet of natural gas remove 20 cubic feet of oxygen from the air of the room, and as air contains only 20 per cent. of its volume of oxygen, the remainder being mainly the inert gas nitrogen, it follows that in this instance 100 cubic feet, or 10 per cent., of the air of this room, are vitally destroyed in one hour.

Supposing that there were no transpiration of the air, we should have in one hour an atmosphere containing one per cent. of carbonic acid by volume—in my opinion a poisonous quantity. Ordinary air contains on an average only one part or volume of carbonic acid in two thousand parts of air inland, while over the ocean, according to Beauvais, there is merely a trace of this noxious gas. But when the proportion is raised to one part in one hundred, then there is danger. Taylor says that "no mineral poison diffused in vapor in the air can act so quickly as carbonic acid or carbonic oxide in extinguishing life," and I quite agree with him. But short of the extinction of life the vitiation of the air of a room with carbonic acid is fraught with danger to health. An atmosphere containing one-tenth of one per cent. of carbonic acid is, according to Roscoe, "unfit for continued respiration."

Chemically pure carbonic acid cannot be respired at all—it produces immediate spasm of the glottis, but if it be sufficiently diluted with air (see Brande), "it operates as a narcotic poison producing drowsiness, entire loss of muscular power, rapidly followed by insensibility and coma." "When the gas is respired in the lowest poisonous proportions, the symptoms come on very gradually and the transition from life to death is usually tranquil." But more than this, if the proportion be only one-tenth of one per cent., the skin and lungs of animals evolve noxious effluvia whose effect is exceedingly injurious, and may be fatal.

Dr. Hay then points out how improper combustion of this gas may prove actively toxic he says:

As a natural consequence of the existing, and to a greater extent, impending scarcity of natural gas, there are at present in the

market various devices for the purpose of using the gas with economy—real or apparent. I shall notice three of these, which have come under my own observation. In one of these the fire-place was shut up, excepting the space of about one-quarter of an inch at the top, by a sheet of asbestos paper in which were stuck little tufts of asbestos fibre. The flames from the burner in the grate coming in contact with these fibres raised them to a bright red heat and produced a very pleasing appearance. But placing my head near the mantal-piece, the odor of the half-burnt dust in the atmosphere was distinctly perceptible, and I arrived at the conclusion that if this odor was not drawn into the chimney neither were the products of the combustion of the gas. These products, therefore, were discharged into the atmosphere.

The second device was even worse. The entire fire-place was tightly closed by a piece of sheet iron made to fit it exactly. Rivetted to the upper portion of this sheet was a hood projecting several inches into the room. Several inches in front of the sheet near the bottom was the horizontal burner from which escaped about eighteen blue flames. In this case all the products of combustion were carefully directed into the atmosphere of the room.

The third device was quite as bad as the second, just described. It consisted of a round sheet iron stove open in front, with a horizontal burner, the flames from which were directed against an inclined plate holding tufts of asbestos. The entire stove could be carried about from place to place in the room, and was connected with the gas supply by means of a long piece of rubber tubing. The stove had no flue, and the entire products of combustion escaped into the room. I was informed that the flame was a pure flame and could do no harm; and, still further, that the combustion was perfect, and that being the case, that the products of that combustion were of an entirely innocent nature. The windows of the room were actually streaming with moisture. The odor of half-burnt dust was strongly manifest. I sat for an hour in this room, and at the end of that time felt drowsy to the extent of being hardly able to keep awake. I had a headache, and on leaving the house was short of breath, and for several hours afterwards suffered from these symptoms. Climbing the hill, I found that my legs had not their usual elasticity of step. In fact, I was narcotized to some extent. I cursed the thing up hill and down dale right in the presence of its owner, and consigned its contriver to a place whose atmosphere, though warm, is certainly not salubrious. These various contrivances have probably secured letters-patent of the United States Government, and the curious will be able to find models of them in the National Toy Shop at Washington, D. C.

The moral of this is obvious. That natural gas consumers should see that the apparatus used, secures perfect ventilation of the products of combustion into the flue, and that the atmosphere they breathe is not vitiated.

SOME SUGGESTIONS ON SPECIFIC DIETETICS.

No intelligent practitioner to-day, disregards the proper selection of foods in disease as adjuvant to medicinal means of restoring his patient to health.

To adapt the diet to the requirements of the individual patient and the disease, is an art which requires the exercise of careful study of the nutritive value and assimiliability of foods, and adequate consideration of individual idiosyncrasy and digestive power.

The literature of dietetics is no longer confined to a few standard books, and further knowledge is constantly accumulating as extra-medicinal means of treatment receive more profound study. That we have a journal devoted entirely to the therapeutics of dietetics, shows clearly the growing interest in this subject.

In a recent issue of this publication, The Dietetic Gazette, we find some valuable suggestions as to the dietetics of nervous and mental diseases, the relation of diet to personal beauty, diet in diphtheria, which we regret we cannot reproduce *in toto*.

Dr. Allan McLane Hamilton, discusses at length the appropriate diet in nervous and mental diseases. His remarks regarding the use of alcohol and stimulants are worthy of special note:

The employment of alcohol and stimulants is a matter to be considered with a great deal of deliberation. It is quite certain that the almost general custom of depriving nervous people of stimulants is a most arbitrary and unwise procedure. While I do not look upon alcohol in the nature of a food, there is no doubt but that it increases the patient's powers of appropriating nourish-

ment, and retards, if not shortens, actual disease. This is especially the case in anæmic states attended by cerebral mal-nutrition, melancholia, and in grave chronic disease of the brain. Often, in cases of advanced organic disease of the nervous system, where alcohol has been indulged in to excess, its stoppage may result in the development of a much worse form of trouble.

There can be no doubt that certain forms of cerebral softening and chronic spinal disease, are materially benefited by a generous diet with an allowance of milk punches. It is quite certain that a stimulating diet is of the first necessity in the sluggish abulic temperament, while the reverse is the indication in persons who are self-willed and refractory, such as prisoners and stubborn boys.

The denial of nitrogen has its effects upon the will. The late M. Metz, of Mettary, the benefactor of the reformatory children of France, found the kind of food given to have a great effect upon the boys; and a generous diet with wine was found requisite to enable some weak-willed, soft boys to keep their resolutions, also the sluggish boys of lymphatic temperament who were liable to relapse into evil ways apparently from inability to remain in the right groove.

Choreic children are undoubtedly helped by a moderate amount of alcohol, and it has been my habit to prescribe a glass of claret with the mid-day meal. Those of us who have witnessed the good effects of a bottle of ale at bed-time, in insomnia, cannot question the value of stimulants in an irritable and fagged brain which is hyperæsthetic and alive to every external impression.

There is much dispute in regard to the use of stimulants in overworked persons, and some writers are disposed to forbid them. Wood says: "Alcoholic stimulants are likewise dangerous allies which should be treated with the utmost caution. In some persons they aid in mental effort, but any use for such purpose is too apt to lead to dependence upon them with its resultant progressive demoralization. When a man is over-wrought up to the exigencies of a great trial, they are especially attractive because there is at such times a distinct physical as well as mental basis of exhaustion. . . . It should, however, never be forgotten that alcoholic stimulants do not give real power except when taken along with food whose digestion they facilitate. A dish of raw oysters with a bumper of claret, or a glass of ale, may afford the often needed sustenance during the labor of a protracted speech, of an exciting political or military contest.

While I am disposed to be liberal in the allowance of alcohol, I must give a word of caution when the neurotic woman is the offspring of nervous ancestors and when her mental makeup suggests that she is likely to contract any luxurious habit for the purpose of killing time or drowning imaginary sorrows. In these cases the alcohol habit is easily formed. In some persons the continual use of large quantities of alcohol is apt to produce neuritis, and this fact shoulp never be lost sight of.

Of course, the use of alcohol and other stimulants, and possible bad effects, depends very much upon the mode of life or place of residence of the individual. Nervous people who live in high altitudes are often injured by the use of alcohol, tea or coffee, possibly after they have taken them with benefit on the sea-coast or lower levels.

Dr. J. V. Shoemaker, in his recent work on Heredity, Health and Personal Beauty, very truly says:

Perfect development depends upon perfect nutrition. It is certain that nutrition cannot be perfect unless the digestive apparatus properly performs its functions. If the normal proportion of acid and ferment be disturbed in the gastric juice, or if the liver, pancreas, or intestinal glands, are deranged, if inactive kidneys and constipated bowels check the elimination of deleterious bye-products, the skin loses its softness and the complexion becomes dull. The beautiful violet tinge of the sclerotic gives place to a muddy hue, the flashing eye grows dull and heavy. The cellulo-fatty tissue of the face wastes, the features grow thin and wrinkles appear. Acne, seborrhœa, eczema, urticaria, erythema or furuncles may develop upon the face, the hair is liable to become dull and thin and the teeth to decay. The angles of the mouth droop, and a haggard, anxious glance replaces the frank aspect of health. Irregularity of features, which was scarcely noticed when the eye was bright and sparkling, the skin pure and the complexion brilliant, now becomes painfully apparent. Good food, well-prepared, eaten leisurely and properly digested, preserves cheerfulness, a pleasant interest in the affairs of life, health and, what is by no means least deserving of our consideration, personal beauty.

Dr. I. N. Love, in the Dietetic Gazette, sums up his discussion of diet in diphtheria, with special consideration of the proper food for children, with the following good advice:

1. Food rich in the elements of nutrition should be constantly presented to children.
2. In order not to surfeit the body, it

should be given carefully at proper intervals and in proper variety. 3. The matter of nutrition should never be lost sight of in the preparation of food, though due regard for the palate and the digestive powers should always be had. In cases of disease it becomes of paramount importance, especially in such an exhausting malady as diphtheria. The attendants of the sick room, moreover, should be impressed with the importance of not only having the food properly prepared, but of presenting it in an attractive form. The little ones have their æsthetic tastes the same as we; and the china should be well selected, and all utensils in which delicate morsels are placed before the sufferer, scrupulously neat and clean. Care should be exercised in the linen; the little waiters upon which the food rests should be well kept, and everything pleasantly arranged for the sensitive feelings of the invalid. A bunch of flowers, placed in proper position upon the little sick one's table, will often do much to brighten an otherwise unattractive spread. We cannot be too careful in our regard for all the various details that go to make up the necessities of the sick room. As physicians, we can often help the digestion of the little one, under our care, by thoughtfully studying the æsthetic features of alimentation and pointing them out to those who are helping us in our work. The result of our treatment is much less likely to be favorable if we fail to appreciate the importance of catering to the "psychical satisfaction" of the sufferer. The nervous system is a very complex organization, and anything which rudely disturbs the palate may upset the whole system. That which is disagreeable or unattractive to the eye, the nose or the palate, may create a general disgust in the nervous ranks, and indigestion, non-assimilation, irritation, restlessness, friction and loss of force be the result. Let us husband every resource we possibly can for the good of our patient, and never lose sight of the thought, that nothing which pertains to and assists in the securement of a successful result, is trifling.

THE ACTION OF "KOCHIN" ON HEALTHY OR NON-TUBERCULOUS INDIVIDUALS.

Koch, in his first communication on his wonderful "lymph," pretended that persons in health react only to large doses of this liquid, and that they present no reaction (or hardly any) under the influence of injections of ten milligrammes and below.

The experiments of M. Peiper, privatdocent at Griefsweld,* made at the Medical Clinic of Prof. Mosler on twenty-two subjects, of whom one was perfectly well and the others were affected with different diseases, not tuberculous (bronchitis, emphysema, rheumatism, cancer, cystitis, tabes, etc.), or convalescent from these diseases, have shown clearly that, despite what Koch has said, non-tuberculous subjects often present *a very marked reaction*, even after injections of only two or three milligrammes. With a dose of 10 milligrammes this reaction is almost constant, for Peiper has obtained it in twelve individuals out of fifteen.

The above statement ought to do away with the impression, which is too prevalent, that Koch's liquid is only a poison to tuberculous subjects.

OXYGEN ADMINISTERED BY THE RECTUM AND BY SUB-CUTANEOUS INJECTION.

Dr. Francesco Valenzuela has written a paper for El Siglo Médico regarding his peculiar plan of employing oxygen by the rectum and hypodermatically. The new treatment has special reference to the relief of senile pneumonia. In the course of his trial of oxygen enemata, he found that dyspnœa was decidedly and permanently relieved. The ease with which the gas was absorbed by the intestines was remarkable. It was absorbed rapidly, almost as rapidly as by the lungs, and he found that he could adminster four injections of five quarts each in an hour. This suggestion opens a comparatively untried field or range of possibly useful therapeusis with oxygen aud other gaseous bodies. Concerning Dr. Valenzuela's use of oxygen under the skin, the results were those of a cardiac stimulant, such as are at times desirable during the collapse that follows pneumonia and fevers of low type, cerebral congestion, and asphyxia. There was no calmative action or diminished frequency of the respirations. The arm was the part chosen for the injections, and the quantity of the gas introduced varied from a pint to a quart. Cellular emphysema was, of course, produced, and a sensation of heat was complained of, but both conditions passed away within a few hours. In the employment of the gas in this manner, the author believes that he obtained his best results when the gas was in its nascent state.

*Deutsche Med. Wochensch.. Jan. 22d. 1891.

Book Notices.

THE COSMOPOLITAN FOR MARCH—

The March Cosmopolitan exhibits a table of contents made up to cover the widest possible field. The magazine is edited upon the principle of giving something that will interest every member of the family circle,—the young woman as well as the philosopher. It opens with an exquisite frontispiece, a reproduction of a painting by Seifert, of Munich, purchased by the Cosmopolitan for use in this way. There is given first a light article treating of the French stage and illustrated in a way that gives an excellent idea of some noted French beauties. Protestant Missions appeals to all who contribute to the great works performed in the name of religion and charity, while in Darkest America is a concise discussion of the Indian question with a great variety of pertinent illustrations. Mrs. Van Renssalaer Cruger writes of the slovenly dressing of Americans, and no one is better qualified to review the subject thoroughly. A departure in magazine work is the long expected autobiography of Frederic Villiers, the famous war correspondent. Villiers writes as well as he illustrates, and his "Story of a War Correspondent's Life" is as entertainingly written as it is skillfully illustrated by this prince of newspaper correspondents and artsts. A striking short story of thrilling adventure "How I Shot My First Elephant," by MacMahon Challinor, "Labor Unions and Strikes in Ancient Rome," and an illustrated article by Dr. G. A. Danziger, are among the best things in the March Cosmopolitan. The regular departments, of Current Events and Social Problems, by Murat Halstead and Edward Everett Hale, respectively, are, maintained with the accustomed wisdom and ability expected of these two well known writers. The brief essays of Brander Mathews on purely literary subjects, are becoming a prominent feature of the Cosmopolitan. Mr. Mathews treats of "Certain Recent Volumes of Verse" in the March number.

A decided acquisition to the staff of the Cosmopolitan Magazine is Mr. Brander Mathews, President of the Nineteenth Century Club, the well known literateur, who takes charge of the department of book reviews. The keen critical taste of Mr. Mathews, and his fine judgment in literary matters, will make his opinion valued in every household. Mr. Mathews' name, added to that of Edward Everett Hale, in charge of "Social Problems;" Murat Halstead reviewing "Current Events;" and Miss Bisland with her European articles, gives the Cosmopolitan a departmental staff of exceptional brilliancy.

CAUSES AND TREATMENT OF STERILITY IN BOTH SEXES, FECUNDATION BY ARTIFICAL METHODS. Translated from the French of Dr. J. Gérard, Paris; with notes by Chas. Everett Warren, M. D., Boston, Mass., U. S. A.; with 200 illustrations designed by Jose Roy. Part 1. Cloth. Published by International Medical Exchange, 51 Union Park, Boston, Mass. Price $1.00

This treatise on a very important subject is to be completed in six parts. That before us is part I. In it is discussed Latent Sterility, General Laws of Fecundation, Rôle of the Ovule, Rôle of the Spermatozoid, Introduction and Marriage of the Cells, The Ovule before and after Fecundation, Concerning the Spermatozoid, Relating to the Secretions, Diathesis.

The other parts will complete the interesting review of the subject discussed, as presented by Dr. Gérard.

The illustrations serve to elucidate and impress on the mind of the reader the lessons taught, and are characteristically French in their frankness.

The author in a very informal way conveys some very excellent suggestions as to the hygiene of the sexual organs, which are well worthy the consideration, not only of the specialist, but of the general practitioner.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By Frank Hastings Hamilton, A.M., M. D., L.L.D. Revised and edited by Stephen Smith, A.M., M.D. Cloth. 8vo.; pp. 850. Price, $5.50. Published by Lea Brothers & Co., Philadelphia.

To no one could better have been assigned the work of revising and editing this classical work, than to Stephen Smith, the former pupil of Prof. Hamilton, and who, moreover, has won for himself a status second to

none as an operating and consulting surgeon. It is doubtful if there is any text-book that can successfully compete for the niche filled by this volume. It is the only complete work of the kind since the publication, more than half a century since, of Sir Astley Cooper's "Dislocations and Fractures;" and its great merits appear conspicuously in its clear, concise, and yet comprehensive statement of principles, which adapts it to the needs of teacher, practitioner, and pupil, alike. The efforts of the editor have been in the direction of rendering the text more compact, eliminating matter now irrelevant or obsolete, and adding new facts, cases, and opinions, necessary to render it a correct exponent of the present state of knowledge in this department of surgery. That these have greatly enhanced the value of the new edition, it seems almost superfluous to assert.

PROF. KOCH'S METHOD TO CURE TUBERCULOSIS, Popularly Treated. By Dr. Max. Birnbaum. Translated from the German by Dr. Fr. Brendecke. Paper; square 12mo.; pp. 105. Price, 75 cents. Published by H. E. Haferkorn, Milwaukee.

Seventy-eight pages of this brochure are taken up with a history of pulmonary consumption, which affords nothing new to medical men, and but little that is available to the lay public. The final twenty-seven pages is a reproduction of Koch's "first communication," as it appeared in the Deutsche Medicinische Wochenschrift, The Lancet of London, Medical News of Philadelphia, MEDICAL AGE, etc., consequently deals with stale matter; certain conclusions, too, formulated by the author, are not altogether fair or just, having been disapproved by late investigations, while others that he assumes to decide definitely, are yet moot questions. The book bears the ear marks of a "pot-boiler," and as such is probably too late in publication to secure success.

WOOD'S MEDICAL AND SURGICAL MONOGRAPHS. Vol. ix, No. 1, January, 1891. Paper, 8vo.; pp. 263. Price, $1.00. Published by Wm. Wood & Co., New York.

This number contains the following essays: "Advances in Bacteriology," by R. Koch, M.D., being the address delivered by the Berlin *savant* before the Tenth International Medical Congress: "Formulary of New Remedies and New Medicinal Preparations," by H. Bocquillon-Limousin; a convenient record of newer medicaments, containing considerable information, not always exact, —there is oftentimes a lack of knowledge, on the part of either the author or translator, of the chemical and pharmacological relation, and constituents: "Anæsthetics," a discussion by Drs. Wm. Macewen, Joseph Coates, T. Brown Henderson, Robert Kirk, and Mr. Hartley. The material, at this hour is "old straw;" the discussion as a whole practically constitutes a criticism of conclusions formulated by the Second Hyderabad Chloroform Commission more than a year since.

OPERATION BLANKS. Prepared by W. W. Keen, M. D., Professor of Surgery in Jefferson Medical College. Price for tablet of 50 blanks, 50 cents. Published by Lea, Brothers & Co., Philadelphia.

Each blank contains, for checking by the operator, a list of all the acts, appliances, and other essentials of any operation. Full directions for preliminaries, preparing patient, room, etc., are embodied, and list of articles to be obtained from the druggist.

MASSAGE PRIMER. By Sarah E. Post, M. D. Cloth, 12mo.; pp. 50. Price, $1.00. Published by Nightingale Pub. Co., N. Y.

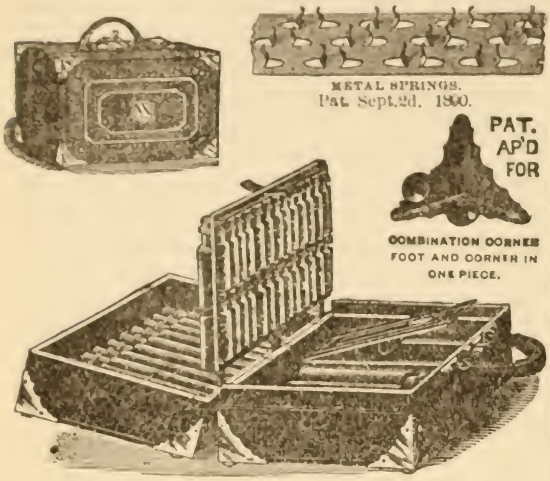
This volume is claimed by its author to be solely for the instruction of nurses. Nevertheless, in spite of crudities of language, and frequent lack of proper grammatical construction, it contains a goodly amount of practical knowledge available to medical men.

"EDISON-LALANDE BATTERY." A forty-page quarto anouncement and catalogue of the electrical appliances made by the Edison-Lalande Co., Orange, N. J. Sent free on application.

Notes and News

A New Device for Holding Bottles.—

We herewith present cuts of a medicine case, showing patented device of metal springs for holding bottles, instead of



the time-honored leather loops. Bottles, when held by leather loops, have to be pulled forward in drawing them out, and nothing can be permitted at the head to prevent the corks from coming out. When, therefore, the content is corrosive or acid, it corrodes the leather loops, as well as the entire lining of the case. When the metal springs are used, the bottles can be picked out from the springs, thus allowing of metal flanges at the head of the corks, making it impossible for them to come out. Leather loops, also, soon become sticky, and give endless trouble in taking out and replacing bottles. With short bottles their contents are nearly all hidden by the loop and label, while, with the springs, the label can be placed anywhere on the bottle, and nothing is hidden. It is claimed that the springs will wear ten times as long as leather loops, as they are made from the best of spring brass, and nickeled. They are cut out by dies from a continuous piece of metal, and so arranged as to bring the bottles in apposition. Entire uniformity of size is thus secured, and as the manufacturers have dies to fit bottles from twelve to thirty-eight millimeters in diameter, they can be applied to nearly every medium case. The springs being more or less adjustable, a variation of a few millimeters in diameter of the bottles does not interfere with their use.

The device is the invention of Mr. John A. Comstock, President of the Western Leather Manufacturing Co., Chicago, Ill.

Union of Columbia College and College of Physicians and Surgeons.—

The College of Physicians and Surgeons of New York, has become a department of Columbia College. By means of it, both institutions gain strength, one by the backing of a rich, strong, and progressive College, the other by the addition of a medical department, second to none in the country. In so far as the latter can now be made independent of the number of students, and their fees, will the cause of medical education be advanced, and the standard of requirements be raised. Under the new rule, the medical professors will receive regular salaries from the Board of Trustees of the College, but will reserve the privilege of nominating the members of their particular Faculty. Not only is this understanding a perfectly proper one as guaranteeing the selection of duly qualified men by the Trustees, but is a becoming concession for the addition of one million six hundred thousand dollars of real estate to Columbia. The President of the Medical Faculty, Professor James W. McLane, who was chiefly instrumental in bringing about this desirable state of affairs, will be the Dean of the Medical Department, and will represent it in the College Council.—*Medical Record.*

Bad Effects of Tight Collars.—

A chapter might be written on the deleterious effects of tight collars, and especially of that variety which project stiffly beneath the neck, to the manifest discomfort of the wearer. By compressing the veins, they interfere with the return of blood from the head, and thereby promote red noses and pimpled faces, against which all the cosmetic lotions in the world are of no avail, so long as the mechanical cause is allowed to remain. Tight collars are even accused—and with some show of reason—of causing serious defects of the visual apparatus, due to the heightened blood-pressure arising

from the artificial impediment to the blood-flow, at the root of the neck.—*Hospital Gazette.*

"A Medical Hat."—

Under this caption, Henry Parsons, in London Lancet, suggests a distinctive head covering for physicians. He says:

"I think it would be a great advantage to many medical men, if they adopted a medical hat. I have been saved many journeys in the country by the fact that my hat differs from that of other people, and I am recognized even on a dark night, and often saved the trouble of retracing my steps for several miles. The hat I have adopted is a hard felt, just the shape of an ordinary straw hat, with low crown, and flat brim. Of course, the hat is easily changed when on pleasure bent, and the cost is half that of a silk one."

The Trained Nurse.—

A sweetly winsome face,
Ripe lips and merry eyes,
Where tender pity lies;
Brown hair beneath a cap of lace
To keep the wayward locks in place.

A fichu neat and plain
Crossed on her bosom white;
Her heart beneath is light,
But throbs in sympathy with pain,
And others' sorrows feels again.

Her very presence heals,
Her quiet footfalls soothe,
Her hand is soft and smooth,
And as my fevered pulse she feels
A glad thrill through my being steals.

And when, grown bold, I say
"I love you, gentle nurse!"
She says, "I'm sure you're worse!
You must not talk; you're worse to-day."
And so she flings my heart away.

—*Judge.*

Sextuple Pregnancy.—

Vasalli (Rassegua di Sunza Med.) reports the case of a woman who in the fourth month of pregnancy reached a size equal to that of term. She was taken with pains, and in the course of six hours delivered of six fœti. Their combined weight equalled 1,730. grammes, the largest weighing 305 and the smallest 250. grammes. Their length varied from 22 to 26 centimetres. The single placenta was large, adherent, and had to be removed piecemeal. It presented six distinct fœtal sacs.

Therapeutic Brevities.

Salol in the Gastro-Intestinal Diseases of Children.—In the treatment of these disorders, Droixhe found (Journ. d'Accouchements, February 28, 1890) that salol administered by the mouth is unchanged until it reaches the intestine and is acted upon by the pancreatic secretion. It is then decomposed into carbolic and salicylic acids. Barr reports thirty-five cases of gastro-intestinal inflammation which were treated with this agent. In cases in which there was acute gastro-enteritis with vomiting and copious offensive stools, salol was efficacious. If the stools were lumpy and the vomit mixed with bile, calomel gave better results than salol. With the serous stools of dysentery and colic, opium should be combined with salol to allay the tenesmus. Salol was found efficient in the first period of acute gastro-enteritis and the chronic forms of entero-colitis. The dosage was three centigrammes for children under six months of age, three to nine centigrammes for those of sixteen to eighteen months, and twelve centigrammes for those who had passed the second year. The drug is easily given, and without toxic action. It is an approved intestinal antiseptic, ranking with naphthol, naphthalin, bisulphid of carbon, and Bellocq's charcoal. It may be combined with saccharate of cannella in the treatment of cholera infantum. Loewenthal used it to prevent the proliferation of the bacillus of cholera, and the formation of toxine which is produced by contact of the bacillus with the pancreatic secretion in the presence of peptonized albuminoids. Experiments were made by this author upon mice, infected material being injected into some of them without salol, and into others with salol. The former became very sick or died, while the latter were unaffected.

Knitted Bandages for Ulcerated Legs.—Staff-Surgeon, Pannwitz, reports in a German military medical journal, the success he has had in the treatment of obstinate chronic ulcerations of the leg, by using tubular bandages of knitted material. Decided improvement followed the first dressing, and by persevering with these bandages, a complete cure was obtained. Ordinary antiseptics may be used at the same time, and of these he prefers iodoform. These bandages were also used in varicose veins, and œdema of the leg, in the place of the ordinary elastic bandages, or stockings, and produced the best results, while even in valvular affections, and Bright's disease, considerable im-

provement followed their application. He thinks them sufficiently elastic for the lower extremeties, and they do not cause an injurious constriction of the vessels, as rubber bandages often do. Uniform pressure prevents a thickening of the margins of the ulcer, and existing indurations gradually disappear. The greater porousness of the bandages is often also an advantage, as the function of the skin is not interfered with. The skin never becomes macerated, as is often the case when rubber bandages are applied, as through the great permeability of the knitted material, part of any liquid discharged may be evaporated. The bandages are also easily cleaned and disinfected, and do not lose their elasticity for some time.—*London Lancet.*

The Management of the Menstrual Epoch.—Dr. A. W. Parsons, of Northampton, Mass., (New York Medical Journal) says: "During the past few months I have adopted a procedure which has afforded me the heartfelt gratitude of every woman who employs it. For obvious reasons its use will be largely confined to married women. A full-sized tampon of antiseptic cotton, to which a string is attached, is inserted in the vagina through a speculum as soon as the premonitory symptoms of the approaching menstrual epoch are noted. It may be left *in situ* for twenty-four hours unless the uterine discharge begins, when it should be removed as soon as it is saturated, and the vagina washed out with a warm antiseptic solution by means of a fountain syringe, and a fresh tampon introduced. This procedure should be continued until the flow ceases. The principal disadvantage of this method is, the difficulty of using the speculum and preparing and introducing the tampon; but I have met with no case where one or two lessons did not teach the woman the *modus operandi*. Its advantages are many. There is entire absence of odor, no necessity of wearing the napkin, and the sense of support to the uterus afforded by the tampon is immediate, and exceedingly grateful."

Subcutaneous Injections of Ether in Hepatic Colic.—Kums, a few months ago, published a paper describing the successful results of this method of treatment in various forms of neuralgia. He has since found, in two cases, that subcutaneous injections of ether are most effectual in relieving hepatic colic. In one of these cases, two injections over the region of the liver, one administered at midday and the other in the evening, and repeated next day, caused great relief. The symptoms of jaundice, however, persisted, and fifteen days later a fresh attack of hepatic colic occurred. Under the influence of fresh injections of ether, the pain entirely ceased, the jaundice disappeared, and no further symptoms had occurred two months later. In the other case, the treatment was even more quickly successful; injections, administered morning and evening for two days, were quickly followed by complete disappearance of pain and jaundice. Kums recommends the use of spt. etheris B.P., a mixture of sulphuric ether, and alcohol in equal parts, instead of pure ether, as he believes that it is more easily absorbed by organic tissues containing water when mixed with alcohol, than when injected alone, and that it therefore acts more rapidly.—*Boston Med. and Surg. Jnl.*

Chrysarobin in Hæmorrhoids.—A Paris correspondent of the Pharmaceutical Record, states that extraordinary success has been reported with chrysarobin, in the treatment of hæmorrhoids. For the external variety, he prescribes the following ointment, to be applied several times daily, after a washing in a 1 to 50 solution of phenic acid, or a 1 to 100 solution of creolin:

℞ Chrysarobin, 80 centigrammes.
Iodoform, 30 centigrammes.
Ext. belladonna, 60 centigrammes.
Vaseline, 25. grammes.
M. Sig.—For external use.

For internal use, the formula is as follows:

℞ Chrysarobin, 8 centigrammes.
Iodoform, 2 centigrammes.
Ext. belladonna, 1 centigramme.
Cacao butter, 2. grammes.
M. Sig.—Make one suppository.

In three or four days, pain and hæmorrhage are said to disappear, and it rarely happens that the most obstinate cases are not cured within two or three months.

A Simple Means of Jugulating Cephalalgia and Facial Neuralgia.—Naegeli reports that he has repeatedly cut short different forms of cephalalgia and odontalgia by raising the hyoid bone, or, which amounts to the same thing, the larynx, and keeping it raised for sixty or seventy seconds. Several *séances* are sometimes necessary, often but one, to obtain complete control over the various neuroses of the cranial nerves, and the cephalalgia resulting from excessive drinking. For the explanation of this phenomenon the author refers the reader to the anatomist or the physiologist.

Therapeutic Uses of Naphthalin.—Dr. Minerbi has treated twenty-three cases of dysentery by means of naphthalin, in suppositories or in enemata, with most satisfactory results, all the patients having been cured in a fortnight. The suppositories were composed of equal parts of naphthalin and cacao butter. In order to act on the higher portions of the bowel, enemata of an ounce of olive oil containing a quarter of an ounce of naphthalin were employed, these being repeated, if necessary, three or four times during the twenty-four hours. This is, he considers, preferable to the large watery emulsion of naphthalin injected by Rossbach, or the combination of the substance with corrosive sublimate proposed by Lemoine. In the rare cases where the seat of the ulceration is in the small intestine, naphthalin should not be used. Thread-worms may be advantageously destroyed by somewhat similar means. For children an enema of three ounces of olive oil containing twenty grains of naphthalin is ordered, and for adults a rather larger quantity of oil, containing about a drachm and a half of naphthalin. It should be mentioned that a certain amount of wind is sometimes produced in the bowels, causing rumbling noises, but these soon pass off.—*Hosp. Gaz.*

The Treatment of Post-partum Hæmorrhage.—In a discussion before the Obstetrical Society of Moscow, Muratow (St. Petersburger medicinische Wochenschrift, Nov. 8th, 1890) reported eight cases of post-partum hæmorrhage in which irrigation with a hot solution of creolin failed to check the hæmorrhage. The uterus and vagina were then tamponed with creolin gauze. Pads and a bandage were placed upon the abdomen, by which external compression was made. The tampons and bandages were allowed to remain two days before removal. Good results followed in all cases.

Rostowzew and Alexandrow reported thirteen cases treated by tamponing the uterus. In a part of the cases the result was satisfactory. In others great pain was produced, and the insertion of the hand within the uterus was considered a safer and more efficient expedient.

A Simple Treatment of Nasal Polypus.—Dr. Kurz, of Florence, recommends the following treatment, when, for divers reasons, the usual method becomes impossible. After having rendered the mucous membrane insensible by the application of a solution of cocaine, a Bellocq's cannula is introduced, and to the spring protruding through the mouth, a strong silk thread is attached well waxed, and of a certain length, to which at certain distances, three small sponges of increasing sizes are tied. The first should be large enough so as to sweep out the nasal cavity, the remaining two to render the same service or to arrest the nasal hæmorrhage if so required. They are then dragged through from behind, forward, and the polypus generally comes away with the first sponge. The same method could be applied with advantage for certain foreign bodies which are difficult of access.—*Med. Press and Circular.*

Powder for the Treatment of Hay-Fever.—L'Union Médical, January 10th, 1891, gives the following prescription for the treatment of hay-fever:

℞ Powdered boric acid, 30 grains.
Powdered salicylate of sodium, 35 grains.
Hydrochlorate of cocaine, finely powdered, 1 grain.

This powder is to be snuffed up into the nasal chambers and if there be any ocular manifestations of the disease, collyria composed of weak solutions of sulphate of copper or sulphate of zinc may be employed. It is also recommended that the patient shall inhale ten drops of the iodide of ethyl from a handkerchief; or six drops of the nitrite of amyl will be found useful if employed at the beginning of the disease.

Useful Formula in Morphinism.—W. I. Cottel during the past six years has had excellent success with the following formula: A mixture from which the patient is easily weaned, when the opiate is withdrawn (Am. Pract.).

Morphia sulphate, or tincture of opium, q. s.
Fluid extract viburnum prunifolium, ½ oz.
Elixir of ammonium valerianate, 3 oz.
Elixir sodium bromide (5 grains to the drachm), q. s. to make 6 oz.

Dose, a teaspoonful when required. In smell and taste this mixture is truly diabolical, and many patients are glad to give up the horrible stuff long before the opiate is entirely excluded.

Treatment of Ingrowing Nail.—Dr. Purckhauer moistens the surface of the diseased nail with a lukewarm 40 per cent. solution of caustic potash, and then scrapes off the softened upper layers with a sharp-edged piece of glass. After a second application of the potash solution the scraping is continued until the nail is as thin as a sheet of

paper. It is then lifted up from the soft parts with forceps, and the diseased parts are excised. The operation, which is unattended with hæmorrhage, has been uniformly successful in the author's hands.

Kola Essence Stimulant.—The Chemist and Druggist, gives the following formulæ for kola cordials, or what it calls "pick me ups:"

℞ Tincture of kola (1 in 20), 1 ounce.
Essence of vanilla, 40 minims.
Simple syrup, 4½ ounces.
Water to 8 ounces.

Mix. Dose. An ounce or more.

Roast kola nuts, like coffee, grind and make into a fluid extract (1 in 2) with 25 per cent. spirit. Use this in the following:

℞ Fluid extract of kola, 10 drachms.
Tincture of canella (1 in 10), 1 drachm.
Essence of peppermint, 8 drops.
Mucilage, 4 drachms.
Syrup of orange, 1 ounce.
Water to 5 ounces.

Mix. Dose: From a dessert to a tablespoonful three or four times a day.

If the latter preparation is to be kept long it is the better for the addition of a half drachm of spirit of chloroform to each ounce.

Ergotin in Gonorrhœa.—According to La Mèdecine Moderne, Roicki, a Russian, uses the following solution of ergotin with extraordinary success in the rapid cure of gleet. The ergotin is administered in pill form by the mouth, and by urethral injections, simultaneously. Injections are made up as follows:

℞ Ergotin, 5 grains.
Distilled water, 1 ounce.

M. Use as an injection several times daily.

It is stated that these injections are well borne, and that the same treatment is applicable to hæmorrhages from either the ureters or urethra.

Mixture for Neuralgic Headache.—The late Dr. Geo. M. Beard devised a mixture which he employed successfully in headaches of all kinds, and which has lately received the endorsement of Dr. E. P. Hurd in his monograph on neuralgia. The prescription is as follows;

℞ Caffeinæ citratis,
Ammonii carb., ää ℈j.
Elixir guaranæ, f ℥j.

M. Sig.—A tablespoonful every hour till the pain is relieved.

The continuous use of the drug does not seem to produce any harm.—*St. Louis Med and Surg. Journal.*

Treatment of Chilblains—Boetz, of Tokio, states that the treatment of chilblains should consist, first in washing with hot water, and second in applying to the surface the following mixture:

℞ Caustic potash, ¾ grain.
Glycerin,
Rectified spirit, ää 6 drachms.
Distilled water, 2 ounces.

M.

The preparation is generally not too irritating, and produces a cure in the space of two or three days.—*Rev. Gén. de Clin. et de Thérapeutique.*

Glycerin Suppositories.—Polubruiski (*Deutsche Med. Zeit.*) advises that glycerin suppositories are useful under the following conditions:

1. Constipation due to hardened fæces in the rectum.
2. Intestinal impaction in large intestines.
3. Pressure on the rectum from tumors.
4. To prevent straining at stool.
5. In children.
6. To hasten and increase ordinary evacuations.

Prescription for Hemicrania.—In the Journal de Mèdecine de Paris the following prescription for hemicrania is given:

℞ Analgesin, 3 grains.
Acetanilid,
Powdered rhubarb. ää 1 grain.
Powdered calamus ½ grain.
Powdered quinine, 1 grain.

This is to be made into one powder, and repeated three or four times a day if necessary.

Bronchial Asthma.—

℞ Ammonii iodid., ℥ ij.
Ext. grindelia robust. fluid., f. ℥ ss.
Ext. glycyrrhizæ fluid., f. ℥ iv.
Tinct. lobeliæ,
Tinct, belladonnæ, ää f. ℥ ij.
Syrup tolu, q. s. ad f. ℥ iv.

M. Sig —A teaspoonful t. d. Extra dose to be given during a paroxysm.

—*Amer. Journ. of Med. Sciences.*

Kerosene in Pleuro-Pneumonia.—It is stated by Scottish papers that a perfect cure for pleuro-pneumonia has been found in "paraf-

fin oil," or, as an American would say, kerosene. It is administered by thrusting a sponge saturated with the oil into one nostril, and holding the other tight, so that the animal must inhale the remedy with its breath. Perfect success is claimed for the new remedy.—*Amer. Agriculturist.*

Delirium Tremens Mixture.—

℞ Potass. bromid.;
Sodii bromid., ää gr. xv.
Chloral hydrat., gr. x.
Tinct. zingiberis, ♏. x.
Tinct. capsici, ♏, v.
Sp. ammonii arom., ʒ j.
Aquæ, q. s. ad ʒ ij.

M. S.—Dose, ʒ ij.

—*Pharm. Record.*

Vomiting in Pregnancy.—

℞ Bicarb. soda, grammes 3.
Potassium bromide, grammes 2.
Sodium bromide, grammes 2.
Ammonium bromide, gramme 1.
Syrup aurantii cort., grammes 30.
Aquæ dtstillatæ, grammes 120.

M. S.—Tablespoonful every two hours until relieved.

Excessive Menstruation.—

℞ Ergot dialysat., ʒ x.
Glycerin, ʒ v.
Acid salicylic., gr. xxx.
Aquæ distillat., f ʒ ijss.

M. Sig.—Inject into the rectum once a day a teaspoonful of this mixture, diluted with three teaspoonsful of water.

—*Jour. Amer. Med. Ass'n.*

Solvent for Diphtheritic Membrane.—

℞ Pepsini, ʒ jss.
Ac. hydrochlor. dil., ♏ j.
Aq. dest.,
Glycerini, ää ʒ ss.

M. Sig.—Paint.

—*Canada Lancet.*

Lanolin Toilet Salve.—This salve, which is composed of lanolin, paraffin, liq. ceresin, and perfume, is a useful application for chapped hands and lips, burns, cuts, bruises, corns, and hæmorrhoids when an emollient is indicated.

Mosquera's Beef Peptone.—The agents for Mosquera's Beef Products, Messrs. Parke, Davis & Co., have added Mosquera's Beef Peptone to the preparations, Beef Meal and Beef Cacao, previously announced. They also furnish Malt Extract with Peptone.

Medical Progress.

THE PROSTATIC ELECTROLYZER. — A NEWLY INVENTED INSTRUMENT FOR PROSTATIC TREATMENT.—John V. Shoemaker, A. M., M. D., in Times and Register, writes as follows:

The efficiency of the Galvanic current from the negative pole, in reducing hypertrophy of the prostate, has been and is being daily demonstrated. It remained for a long time, however, a desideratum to find the best mode of administration of the current to the gland. Its administration through the urethra, unless for the relief of certain kinds of stricture, within the lines laid down by Dr. Newman, is not, for several reasons, an advantageous mode for the relief of prostatic enlargement. One of these is that a bougie, adapted by its smallness to urethral treatment, conveys to the prostate an insufficient current for the purpose of its relief, or else one so concentrated as to be beyond the tolerance of the patient, and too severe for the affected organ. Were these not good and sufficient reasons against this procedure, the indisputable fact remains to be cited, that some persons do not bear even simple catheterization at all well, and that electrical treatment of the prostate must be frequent to be efficacious.

Dr. Keith, of Edinburgh, not long since said, in the British Medical Journal, that if one could lift the veil of the past, there would be revealed a great vista of human suffering which modern knowledge of and practice in electricity would have alleviated. Firmly holding with him this view, and in particular, upon excellent authority, as to the best and only real mode, at present known, of relieving hypertrophy of the prostate, we have no hesitation in defining this as the only truly remedial treatment known for hypertrophy of the gland in restoration of its functions, operative procedure looking, as is evident, to its greater or less destruction.

To realize, in addition, the efficacy of the instrument lately invented, which forms the special subject of this article, it will only be necessary to compare with the mode of treatment that it involves, that which, from its frequency, we may designate as the present general mode of administration of the galvanic current to the prostate. This is by the negative pole, represented by the olive-shaped bulb-electrode, introduced into the rectum, until it rests above the prostate, the current passing by placing on the thigh the "indifferent" positive pole, masked by a

moistened sponge. It ought to be evidence that the prostate is not thus treated to the best advantage; that, in fact, we cannot know how much or little of the current is passing through the organ. But this is by no means all, nor the worst that can be said of this mode of treatment. Given by the physician, it also ignores the circumstance that only the patient can decide, through sensation, what is agreeable to him and conducive to his good. It follows from this last consideration that the patient, and only the patient, should be the person who, under the immediate direction, or with the general advice of a physician, should administer the current to himself. And this is additionally imperative, from the fact that any one suffering from hypertrophy of the prostate should have a battery absolutely at his command, for prompt administration of the current in the emergency of attack growing out of gouty or rheumatic diathesis, and even apart from these conditions, for the daily treatment that reduction of a highly hypertrophied gland necessitates, down to the time when, the affection being sensibly relieved, an occasional administration of the current suffices for the patient, until a permanent palliation or a radical cure is effected.

The resistance to the current varies, in different conditions of the parts, from 2,500 to 3,000 ohms. Under this range of conditions the milli-amperemeter indicates, with a proper current for the treatment, from two to three milli-amperes. Exceptional cases bear much more, but this suits most patients, the duration of administration being, for the average, from three to five minutes after the current is felt to be flowing freely through the prostate, and an agreeable sensation of warmth, relief, and comfort has supervened. The instrument referred to is simplicity itself in its adaptation to this purpose. It is never necessary to attempt to secure complication —it only too frequently comes of itself. It is accomplishment of purpose with simplicity of mechanism that is the difficult thing to achieve. This instrument, through its mechanism, administers the current just as easily, and in the true direction, as an enema pipe performs its function. The patient frequently obtains from a single administration of the current, instantaneous relief from all pain and distress. We had one case lately in which the gland was enormously enlarged and the suffering acute, where relief for two weeks followed the only administration that the person had up to that time received. Digital exploration soon evidences a reduction of the hypertrophy of the gland. Often only a few administrations are necessary to relieve pressure upon the urethra and to restore ease of micturition. It is not too much to claim, upon the basis of our own experience and that of competent authority which reaches us, that in the great majority of cases, if taken in time, the disease can either be radically cured, sensibly abated, or at least divested of pain. It should also be added, that simple irritation of the neck of the bladder, uncomplicated with disease of the prostate, is also relieved by the same treatment with this instrument, which, of course, from difference of anatomy in the sexes, would not be applicable to the female bladder.

In calling attention, in the interest of the profession and the patient, to this new instrument, it does not fall within our province to summon certificates to the aid of our statements. That will come within the province of the manufacturers of the instrument, E. A. Yarnall & Co., of whom all details may be learned, including those relating to a small but very efficient battery that has been devised for use with the electrolyzer. We are, however, pleased to be able to say that it was at our own instance that the inventor of the instrument was led to devise it for the purpose of an efficacious Galvanic prostatic treatment such as did not previously exist. After its construction it was shown to some distinguished surgeons, and passed the ordeal of their decision as to its anatomical adaptation to the best advantage for the purpose for which it was devised.

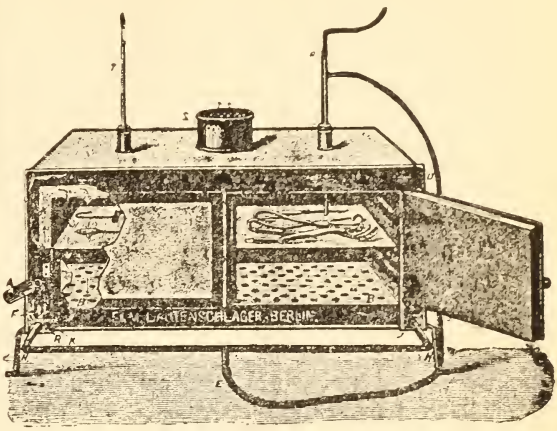
It is a patented article, but patented by one of the laity, no physician having any pecuniary interest in it. In saying this, we gladly seize the opportunity of uttering a long-contemplated word regarding what is deemed by the profession generally as an integral portion of its ethics. The majority seem to confound medicinal nostrums with patented mechanical contrivances. But they are, in point of fact, antipodal, because one professes to conceal, and does conceal, while the other professes to reveal, and does reveal. The very idea of "patent," underlying the etymology of the word, is, exposure to public knowledge. The effect of the maintenance of the false ethical standard to which we are referring is manifold, leading to the temptation, on the one hand, to evade the restriction by subterfuge, and, on the other, to defy the formulated rule of the profession. But the worst effect to which this false ethical standard leads, is to large abstention (under compulsion) from what, under more favorable auspices, would accrue to the benefit of humanity. We may rest assured that the day is not far distant when the dictates of

common sense will lead to the abrogation of the rule, and leave to the physician the free agency in this particular which he enjoys with his fellow-men in other matters, for his freedom in it is in the interest of the world as well as in his own. Patent, while tending at least to avert personal loss, enlists personal interest in general welfare. It is advantageous to the public as security against degradation in manufacture, and renders possible gift to the world which would be absolutely impossible to philanthropy the most enlightened and well endowed with wealth. Ours is not the first protest that has been raised against the false ethical standard of which we have spoken. We do not claim priority in the perception of its absurdity, we but join our testimony to that which has already condemned the view that is the basis of the rule observed, as an entirely incorrect one, repugnant to modern lights.

Improved Apparatus for Sterilizing Surgical Instruments and Dressings.—Ernest W. Cushing, M. D., in Boston Medical and Surgical Journal, describes this apparatus:

The inconveniences connected with the methods of sterilizing surgical instruments by immersing them in antiseptic solutions, or by boiling them, have led to the introduction of apparatus for the use of dry heat as a sterilizing agent, the only difficulties to be overcome being the regulation of the temperature, and the even distribution of heat throughout the apparatus.

The oven shown herewith was purchased in Berlin last summer, and may be described as follows: There is a triple metallic box, covered with layers of asbestos, and with doors opening on the front. In the free space, C, between the two outer layers, gas mixed with air is burned in a long row of small flames, F. The vapors from the flames pass out by a chimney, S, after circulating around the oven. The draught thus created causes fresh air to pass in at the bottom of the apparatus at R, the air is heated greatly in passing between the two metallic surfaces outside of the cavity of the oven and inside of the chamber where the flame is, K. This hot dry air then enters the oven from above, surrounds whatever may be in it, and passing below K, goes, already hot, to feed the flame before finally escaping. A mercurial regulator, and a thermometer, enable the temperature to be kept at any given point; 150° C., equal to about 300° F., is a temperature sufficient in one hour to thoroughly sterilize the contents of the oven, without injuring steel, annealed glass, or dry catgut, cotton, woolen or silk.



It is thus possible to pack in a metallic box nearly everything which it is necessary to use at an operation; such articles may then be sterilized altogether in the box, and the latter need not be opened until the very moment of operation. I show here a box which I have had constructed for use at laparotomies, fourteen inches long, ten inches wide, and two inches high. This contains two trays, in the upper of which are laid all the instruments likely to be wanted, while in the under one are some which may possibly be needed. The abdominal bandage, absorbent cotton, and gauze, for the abdominal dressings, are all laid in the lower tray; there also are needles ready threaded with silk, envelopes containing dry catgut, cut in proper lengths for use; a separate envelope contains fine needles already threaded with silk, and such other things as may be needed in case it be necessary to suture the intestine; three glass drainage tubes of various lengths complete the outfit.

Of course it would be easy to arrange a box for any other operation, such as a trephining, an amputation, or an operation on bone, and it is easy to see the great amount of labor which is saved by the fact that no instrument is wet or soiled which is not actually used, while the hands of the surgeon are spared the consequences of repeated immersion in carbolic solution, and the injury to the instruments, which is inseparable from boiling, is avoided. The advantages which are claimed for this oven over all previous ones are, first: That sterilization is accomplished simply by a current of hot air; second: That the bottom is not excessively heated, and the temperature throughout the oven is the same: Third: That the finest instruments are not injured in point or

edge, and they may be laid anywhere on the shelves in the oven without special protection; fourth: That with consumption of very little gas, the full temperature of 150° C. may be obtained within twenty minutes; lastly: That this apparatus may be used for sterilizing other things besides instruments and dressings. For example: A suit of clothes which has been worn where there is infectious disease, may be folded, laid in the oven, and baked without injury to the fabric.

Beef Preparations.—The value of properly prepared beef for the sick and convalescent cannot be over-estimated, and yet many practitioners are content to let their patients recover as best they may under the use of beef-tea and other substances which contain but little nourishment. Of course the result is, that convalescence is unduly prolonged, and not infrequently relapses occur. The writer remarked this peculiarity some years ago in the case of typhoid fever patients. Where suitable beef preparations could be taken, after the disappearance of the fever, recovery was always more prompt than when the patient was compelled to subsist on a liquid diet.

The difficulty heretofore has been a lack of suitable products. Partially digested beef was always objectionable to the palate, and the character of the beef obtained from the shop such that it was expensive and unsatisfactory preparing the meat-juice, which is so nutritious. Peptonized products, when improperly stored, are not without danger to the patient, owing to the possibility of ptomaines being developed. These difficulties apparently have been removed, a most desirable article being now furnished by the Mosquera-Julia Food Company, through their agents in this country, Messrs. Parke, Davis & Co. The beef-meal offered by this company is both nutritious and palatable, and may be used in a variety of ways which will be found convenient in the sick room. The beef-cacao is a nutritious and agreeable beverage, and convalescents will take it quite as readily as they do the plain cacao. The writer has found on several occasions that a quantity of the beef-meal prepared with plain hot water and a little salt added, fully supplies the place of a lunch in the middle of the day. It may often be used in this manner where the digestion is slow, and where a full meal in the middle of the day is attended with drowsiness during the afternoon. Lawyers, teachers, and professional men generally, will find this a desirable plan when they wish to accomplish a certain task which would have to be deferred were they to sit down an eat a hearty meal.—*Medical Summary*, Feb., 1891.

Transfusion of Defibrinated Blood and Common Salt Solutions.—Dr. J. Marshall (Hoppe-Seyler's Zeitschr. f. phys. Chem., November, 1890) says Bergmann has recommended the employment of a 0.6 per cent. solution of sodic chloride for transfusion; but it is not easy to understand what other purpose this can fulfil than the mechanical filling of the blood vessels, as the respiratory elements are wanting in the fluid. Landerer, on the other hand, employed blood for this purpose, its tendency to coagulate being hindered by the addition to it of a 0.6 per cent. sodic chloride solution saturated with carbonic acid. In this way, in spite of the risk due to the carbonic acid, very successful results were obtained. Landerer's experiments showed that it is not necessary to introduce into the system the original number of the lost corpuscles in order to attain the wished-for result. Thus, according to him, the loss of two litres of blood could be rendered harmless by transfusing into the circulation a mixture of 400 cubic centimetres of blood and 1,600 cubic centimetres of a weak sodic chloride solution. In Dr. Marshall's experiments the general method employed was to bleed a rabbit, that had been anæsthetized with ether, until convulsions set in as the result of the loss of blood, and then to transfuse into it an equal volume of fluid consisting of one part of the defibrinated and filtered blood of the same rabbit, and nine parts of a 0.6 per cent. sodic chloride solution. The percentage of the hæmoglobin, as well as the number of red corpuscles in a cubic millimetre of blood, were estimated before and after the operation, and for several days subsequently. One only of these experiments will be here detailed, as the results varied very slightly in the rest. Rabbit; weight before operation, 2,270 grammes; blood removed, 38 cubic centimetres. Into the jugular vein 38 cubic centimetres of the mixture of defibrinated blood and sodic chloride solution were transfused in five minutes. Before the operation about 4,500,000 corpuscles were present in 1 cubic centimetre, and 13.4 grammes oxyhæmoglobin in 100 cubic centimetres of blood. After the operation the numbers were respectively 3,900,000 and 10.5 grammes. At the end of a week the number of the corpuscles was completely restored, while it was not until after twenty-three days that the hæmoglobin was raised to the same percentage as before the operation.

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Original Articles.

A NEW TRACHEOTOMY INSTRUMENT.

BY L. OLIVIERI, M. D.

Several months ago, in reflecting on the different systems and instruments used in performing the operation of tracheotomy from Casserius, 1600, down to my eminent teacher, Professor Caselli, who stands at the head of Italian surgeons), I was struck with the idea of improving these instruments so as to render this important operation easy, safe, and at the same time rapid.

I flatter myself that the instrument which I present will, meet with general approval.

The first object of my invention was to provide an instrument for use in making incipient incisions into the windpipe, which by its peculiar construction clearly demonstrates to the operator when the throat is entered, and thus prevents the possibility of a deceptive or false incision to remedy which requires minutes, when moments decide life or death.

This instrument consists of one hook, the point of which is very sharp; and its back, from the point to the highest part thereof, is provided with a channel or groove, the lateral dimensions of which gradually increase as it passes back from the point until it reaches said highest part. This hook is tangentially supported by an arm which continues with the body and the handle of the same. Said body is jointed for convenience of manipulation to the handle by a suitable link, by means of disk-shaped bosses provided with radial grooves on their surfaces, and coming in contact by means of the screws, are bent and locked together so that the handle may be at any angle desired. The most important part of the hook consists of a small, delicate wind-wheel the axis of which is journaled in the extremities of suitable lugs arising from the rear end of the highest part of the hook. The ends of the vanes of said wheel are brought at right angles into the groove near the mouth of the incision.

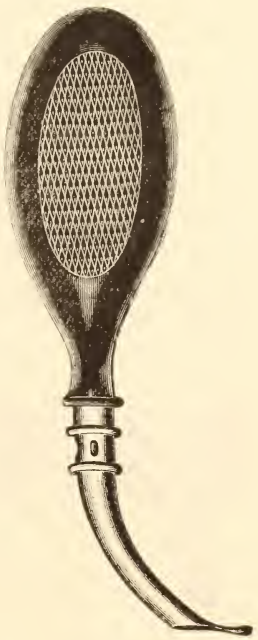

FIG. 1.

When the patient is situated in a convenient posture ready for the operation, the surgeon marks the position of the lowest part of the cricoid cartilage, and inserts the point of the hook slowly and carefully in the windpipe. The suppressed air exhaled from the lungs rushes out through the groove, and the wind-wheel is revolved rapidly more or less as the air from the throat passes it, and thus makes known to the operator that his instrument has reached the objective point. This delicate wind-wheel is principally necessary where the patient is exhausted and weak, and the exit of air through the groove so faint as to be liable to deceive the operator. When it is evident that the windpipe is entered, the

*Read before the Chicago Academy of Medicine, January, 1891.

surgeon turns up, or aside, the wind-wheel, and uses a bistoury in the groove of the hook and cuts as necessary, so as to enlarge the opening into the same; he then immediately inserts into the wound a conductor so made as to widen it, and direct the entrance therein of the tube.

The second part of my instrument consists of a curved tube, which is properly attached to a handle serrated along its sides so as to provide a tongue which tapers to a rounded point, and which can be easily inserted into the wound made by the bistoury without lacerating the sides of the same; and the end of said tube next the handle is provided with one or more openings to permit the escape of the air whilst the introduction of the cannula is made. Thus this holder combines the offices of conductor and dilator at the same time. The cannula (Fig. 2), which must be fixed in the throat, has its advanced end cut away obliquely so as to conform somewhat to the shape of the holder which it surrounds, and with which it is inserted or carried into the throat when said holder is inserted therein.

Fig. 2.

In conclusion, this instrument enables the operator to perform tracheotomy by three short stages:

1. Insertion of the hook into the windpipe:
2. Slitting with the bistoury:
3. Introduction of the cannula.

Discussion.

Dr. G. Frank Lydston: There is comparatively little to be said regarding this apparatus. I would simply state that I consider it a very ingenious instrument for the performance of tracheotomy, and that it would be exceptionally valuable to any practitioner who is called upon to do that operation. I have had some little experience in the performance of tracheotomy—experience which has been rather different from that claimed by some physicians, who assert that the operation is simple in its performance. Some of our most prominent surgeons had rather do almost any other operation in surgery than tracheotomy; and sometimes it is a difficult operation to perform. A case in which Dr Paoli saw me operate was an illustration In that instance, I performed tracheotomy in a case of cellulitis of the neck, with œdema of glottis which was secondary to septic glossitis. It was a rare case, one in which septic infection occurred in a small ulcer on the base of the tongue. I first saw the patient about ten o'clock in the morning, at which time the tongue was only slightly swollen. About eleven o'clock that night I operated, and at seven o'clock the next morning the patient died of heart-failure The œdema extended so rapidly to the structures of the neck that I was compelled to operate to prevent him from dying from suffocation, although the case was hopeless In that case, this apparatus would have been very valuable, as much time was lost in opening the trachea.

The assertion is made by some surgeons that the operation of tracheotomy *per se* is not dangerous. My own experience has convinced me that when a child is prostrated from diphtheria, or from dyspnœa incidental to membranous croup, the vital functions are greatly depressed, and the operation is sometimes sufficient to turn the scale against the patient. I am quite certain that there is more profound shock than is generally believed incidental to cutting into the trachea. If we perform the high operation of tracheotomy, the operation may be simple, but if for any reason we wish to go below the thyroid isthmus, it may be very tedious. We cannot insert the tube in a hurry. Sometimes it takes quite a little time to find the trachea The movements of the child, the respiratory effects, and the hæmorrhage which occurs in cyanosed children, are apt to cause confusion and make the operation tedious. Dr Olivieri's instrument should be of great service. It seems to be a very simple appa-

us, which can be speedily introduced, and ith the use of a little cocaine, hypodermati- lly, the danger of tracheotomy, if per- rmed with such an instrument, should be ry materially reduced. I think that by its e the element of shock could be done way with almost altogether. With the ordi- ary methods of operating, every now and en we find a case dying upon the table, ther from the anæsthetic, from shock, or ffocation incidental to delay in opening the achea and inserting the tube.

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CARDIAC ARYTHMIA.*

BY JOSEPH M. PATTON, M. D.†

If any apology is needed for the considera- on of what generally obtains as an objec- ve symptom, it is to be found in the great equency of an arythmic condition of the eart, and the difficulty of interpreting its nport.—By cardiac arythmia we mean some eparture from the natural physiological ıythm of the hearts action.

That there are certain variations in the fre- uency and force of the heart's action, pecu- ar to persons of certain nervous dispositions, nd which might be considered physiological ı such individuals, will be admitted by all; ut any marked departure from the regular equence in which the different phases of the eart's action occur, is to be considered an vidence of disease, and especially so when xertion or excitement is not a factor in its roduction.

There are many varieties of irregular ac- ıon of the heart, the different peculiarities epending on the cause, and the different onditions with which they may be asso- ıated.

Irregular heart's action is not a constant ttendant of organic disease of the valves or eart muscle; on the contrary, eliminating ll nervous and reflex causes, it is seldom resent in such conditions, except during xertion, or when a hyposystolic or asystolic ondition has been developed, and is then vidence of mechanical inability of the heart ıuscle to perform its rhythmical action properly. The severity of the arythmia is not to be depended on as an indication of the non-integrity of the heart muscle. For instance, in a recent case of dilatation of the heart cavities, with extensive pericardial adhesions, very severe arythmia had been an enduring symptom but a few hours before death, and as unconsciousness developed, the heart became more regular and even than it had been at any time for months previous.

There are many forms of changed frequency and force in cardiac action, occurring in persons who have always been in good health, and in whom the most searching examination fails to elicit any evidence of abnormality in the heart or any other organ: Thus, in a lady patient there is a single intermittence of the heart, varying from the eighth to the twelfth regular action, the period of rest being just twice the usual length, and followed by a systole of more than the usual force; there is a remittance in force of the heart's action, simulating this condition, which gives an absence of radial pulsation (due to a single weak systole), and followed usually by a contraction of more than usual force; this condition is apt to develop in certain forms of slow pulse, as in sclerosis of the coronary arteries, or sometimes after the administration of digitalis, and has been designated *ictus cordis bigeminus*.

My attention was recently called to a man in whom there is regular intermittence of every fourth systole, with unvarying regularity,—a man of exceptionally good health, in whom no evidence of cardiac disease can be obtained. A lady patient presents a pulse-rate averaging one hundred; and a man one which is rarely ever above forty-eight per minute; neither of which presents any evidence of change in the physical condition of the heart. These varieties of arythmia, of which there are many interesting examples, are disturbances of the innervation of the heart, are of interest as clinical curiosities rather than evidence of disease.

If then, arythmia of the heart is not, with some exceptions, a symptom especially connected with changes either in the valves, endocardium, or size of heart cavities, and does not in all cases attend disease of the cardiac vessels or muscle, it is of interest to

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the clinician to determine its relation to the cardiopathic state.

There are many forms of arythmia arising as a result of disturbances in other organs. Thus we often find it present in gastric catarrh, hyper-acidity of the stomach, inflammatory conditions of the duodenum and bile tracts, congestions of the liver, intestinal worms, ovarian disease, in early pregnancy, etc.; these probably arise from disturbance of the sympathetic nervous system, and the only reason we can give for their appearance in only a portion of cases where abdominal irritation exists is, that of unusual irritability of the cardiac plexus and ganglia.

In gastric fermentation, and distension by gas, the pressure on the diaphragm may give transmitted gastric pulsation, and a sensation of greater force, but the change in rhythm, if any be present, is due to reflex nerve influence, and not to pressure, as the heart may be displaced in different directions by pressure without in any manner affecting its rhythm. One of the most marked and troublesome forms of arythmia is that due to arterio-sclerosis, with or without disease of the kidneys. Here the irregularity develops more or less suddenly, and consists of a very rapid, forcible, and irregular action, which is due to a spasmodic contraction of the arteries throwing more work on the heart than it can accomplish; this results in an acute attack of irregularity in contradistinction from the systole of organic disease of the valves, and its sequences, where the arythmia approaches in a gradual manner, preceded by the various œdemas and congestions indicative of a failing heart. Arterio-sclerosis may affect the cardiac vessels as well as the systemic, and eventually results in sclerosis of the myocardium. Huchard and Weber have advanced our knowledge in this connection. In cardiac arterio-sclerosis three varieties are described. A distrophic variety, beginning as an endarteritis at the utmost distance in each arterial tract from the corresponding arterial supply, extending centripetally, thus involving, last, those muscular fibres which are farthest from the affected vessels; an inflammatory variety, beginning as a peri-arteritis; and, lastly, a mixed variety, beginning as an endo-peri-arteritis. These are of no clinical import ance, as they cannot be so distinguished Symptomatically, Huchard distinguishes fiv types of artèrio-cardiac disease: 1, Pulmon ary: 2, Painful: 3, Arythmic: 4, Tachycar diac: 5, Asystolic. Also three stages of th disease: (*a*) Pre-arterial, with increased ten sion without vascular lesion: (*b*) Cardio arterial with vascular endarteritis, peripher visceral, and myocardiac, with increased ten sion: (*c*) Mitro-arterial, with dilatation cavities, and auriculo-ventricular orifice with lowered tension.

The attacks of arythmia may come on a irregular intervals with great dyspnœa, con gestion and œdema, scanty urine, and albu minuria, and finally develop into a conditio of permanent asystole, which may easily b mistaken for asystole from the consequence of organic valvular disease. In some in stances no albuminuria will present itself i asystole of cardio-vascular origin.

The painful and asystolic types of sclerosi are to be associated with ischæmic lesions the painful, arythmic, and dyspnœic type with cardio-renal or cardio-aortic lesion In some cases extensive disease of the muscl fibres has been found which gave rise to n marked symptoms; again, slight lesions caus grave disturbances. In explanation of thi fact, it has been assumed that tolerant an intolerant regions exist in the heart, intole ance being caused by the absence of neces sary anastomosis with an obliterated arter These intolerant regions are especially th papillary muscles, the fibres in contact wit the ganglia, and the intra-ventricular septun Permanent arythmia and asystole fro nervous origin, are attributed to disease c this cardiac ganglia, but not in all cases, a simple lesion of the cardiac muscle is capabl of producing disturbances of rhythm. Scle osis of the coronary arteries, is the mai cause of sclerosis of the myocardium, an experimental closure of these arteries pr duces arythmia and asystole.

The arythmia accompanying these vari ous forms of arterial disease, is due, in mos cases at least, to the increased arterial ten sion; and the more sudden and marked th arterial spasm, the more spasmodic an severe will be the arythmia.

Von Basch, in an article on cardiac asthm

efers the irregularity, in some instances, to igh tension, the arythmia disappearing radually under treatment, being converted nto alloarythmia, that is, a regular form—igeminal, or trigeminal—of arythmia. He hinks the sphygmomanometer should be sed in determining the tension, as this may ecome lower while the arythmia persists.

Concerning the pathology of the more urely nervous forms of arythmia, these ave been studied by Lancereaux, Iwanowki, Putjatkin, Uskoff and others, with refernce to the nerve fibres and ganglia of the eart; they have found nuclear and connectve tissue proliferations, degeneration of erve cells, and fatty and pigmentary change n the ganglia. S. Mayer has shown that here are in the nerve fibres changes of deeneration and regeneration, which obtain in ormal conditions, and this is probably true f the ganglia.

Adolph Ott has made extensive investigaions in this connection, and describes seveal varieties of anatomical changes, which nay be divided into two types: One of conective tissue development, with round cells n interstitial tissue, swelling and proliferaion of nuclei of Schwann's sheath, and fibous change in interstitial tissue, and: One of parenchymatous degeneration, with cloudiess and fatty degeneration of protoplasm, vith disappearance of nuclei of ganglion ells. Both forms may occur with general besity, but the hyperplastic condition more requently than the degenerative.

When changes in the tissue and size of eart occur as a result of stasis, the tissue yperplasia is found, while the degeneration f nerve cellular elements is found associated vith marked alterations in the blood. It is o be remembered that no relation could be liscovered between the character of these hanges and the clinical symptoms of force, requency, or rhythm of the heart's action luring life, despite the fact that degenerative hanges in the heart muscle accompanied the hanges in the cardiac nervous system.

Leyden says that arythmia (meaning irregularity or intermittency) in the course of eart disease does not influence the prognois, as it does not decide anything. The nore severe forms of arythmia occurring in he later stages of cardiac disease, and which result from more or less rapid dilatation of one or both ventricles, are of serious import, and evidences of inability of the cavities to empty themselves; this condition may also obtain from severe heart strain in a weakened or even healthy heart. In these rapid dilatations a condition of delirium cordis, *delire du cœur* or *folie du cœur* of the French, is developed, in which the rhythm of the heart cannot be distinguished; a still more pronounced form is the tremor cordis, in which a trembling motion is conveyed to the chest wall, and when nothing but an almost continuous heart-sound can be heard.

The only form of organic valvular disease, in which arythmia is often obtained early, is mitral stenosis; here the irregularity and difficulty with which the auricle is emptied seems to determine an arythmia which may be considerable.

It is quite surprising the amount of arythmia which will be tolerated by the heart for years, whether it be associated with valvular disease or not, with comparatively little damage resulting, even though the irregularity be so great that it is difficult to distinguish between the two sounds.

The amount of arythmia present cannot be determined by the radial pulse, as it may have the semblance of regularity, when the action of the heart is quite the contrary, as before pointed out. A regular remittance in force may give a corresponding absence of radial beat, and thus simulate brachycardia.

A double first sound, and re-duplication of the second sound, are changes in rhythm which have been respectively attributed to non-synchronous contraction of the ventricles, and to irregular pressure in the aortic and pulmonary systems.

That the ventricles may act independently of each other, has been demonstrated, but it is hardly safe to assume this as always the case in double first sound. Intensification of the second sound, and a reduplication of the same, may be found when there is considerable difference in pressure in the two systems of vessels. Intensification of the second pulmonic sound is, as pointed out by Clark, of England, a valuable indication in pulmonary diseases, by which we can judge of increase or diminution in pulmonary ob-

struction, and also of the power of the right ventricle, of which the radial pulse furnishes no reliable indication, as the pressure in the two systems of vessels may vary greatly, as has been proved by the experimental administration of drugs by Dr. James Andrew, in the Harveian Oration for 1890.

Among the nervous forms of arythmia is that induced by the excessive use of tobacco. Fraentzel thinks, that changes in the musculo-motor and inhibitory heart centers are probably the cause, and that it does not depend on the amount of nicotine taken into the system. On the latter point, I cannot agree; while the amount of the poison which will affect different individuals must vary greatly, the effect in any one individual who is the subject of a tobacco heart, will be directly proportionate to the strength and amount of tobacco consumed, a point which the author quoted virtually admits. It is probable that the effect here is through disturbance of the accelerator centers, rather than paralysis of the inhibitory apparatus. This form of arythmia is generally more or less intermittent; especially in the milder forms, a temporary indigestion is apt to induce or aggravate an arythmia of this nature. There are no changes to be detected on physical examination, and if the use of tobacco be dispensed with, the heart generally will gradually return to a normal action, though sometimes a nervous arythmia is induced which remains for years or during life.

The "gallop rhythm" is a form of arythmia which has received special attention; it consists of three heart sounds heard with one rhythmical heart's action. A "sort of gallop rhythm," is described by Traube, which he ascribes to vibration of the auriculo-ventricular valves by the contraction of hypertrophied auricles, reasoning from the assumption that the systolic sound heard over the ventricle is due to vibration of these valves from rapidly increasing tension during systole. French writers have also described the symptom, but on account of the confusion of the terms *systolic* and *diastolic*, as applied to different periods of heart's action, it is difficult to follow them.

Johnson described the "gallop rhythm" under re-duplication of the first sound, coming to practically the same conclusion as Traube.

I am not convinced that an hypertrophied auricle can produce audible vibrations of valves that are not diseased, nor do I believe that rapidly increasing tension of the valves during systole has any effective part in the production of the first sound. The peculiar rhythm described by Traube should be referred, I believe, to changes about the auriculo-ventricular valves.

Fraentzel describes the "gallop rhythm" as the occurrence of three heart sounds during one heart's action, two of which occur in diastole, the first diastolic sound being accentuated, in contra-distinction from Traube's "sort of gallop rhythm," where the second or systolic sound is marked. According to Fraentzel, it is independent of direct disease of the heart, and essentially a sign of heart failure. He assumes that it is produced by weak heart's action causing irregular reflux of blood in the two arterial tracts, therefore the production of the second sound in the two arterial tracts at different times. He thinks this can hardly be mistaken for the simple intensified or the interrupted second sound, produced by irregular tension in the arterial tracts. Fraentzel's explanation would necessitate that the ventricles contract in a manner not absolutely synchronous, and this cannot be assumed in all cases. I think that great variation in tension in the two arterial tracts is an important factor; in some cases at least, much greater variation than that which produces the interrupted second sound. The vascular recoil will of course vary in accordance with the tension, and the valve sound will occur first, and be most marked, over the valve closing the tract in which the high tension occurs, thus: In a case recently seen in consultation with Dr. R. N. Hall, of this city, an exquisite "gallop rhythm" developed in a boy, the subject of recent rheumatic mitral disease with dilated cavities, who had developed pneumonia of the left lung. Here the rhythm was evidently due to increased tension in the pulmonary artery closing the pulmonary valve quickly.

Bouveret and Chabalier think that in cardiac hypertrophy of renal origin, the "gallop rhythm" is due to repeated closure of the

mitral valve. It is more reasonable to refer it, in this instance, to the relatively high tension in the aortic system, and its effect on the closing of the aortic valves. Let me say here, that Krehe has demonstrated, that in animals bled to death from the aorta, the aortic valve sound disappears some time before cessation of the first sound.

"Gallop rhythm" may be found in any condition causing weakness of the heart muscle and dilatation of cavities; it is heard in chronic nephritis, gastro-hepatic affections with weak heart—probably from sympathetic nervous influence—the acute febrile diseases, exhaustion from hæmorrhage or profuse diarrhœa, and in obstructive pulmonary diseases,—though here we more often get simple intensification of the second sound.

In intimate relation with the forms of arythmia already considered, are those conditions of changed frequency of the heart's action known as tachycardia—febrile and paroxysmal,—brachycardia, palpitation; also the tachycardia of exophthalmic goitre.

Febrile tachycardia generally depends on the effect on the nervous system of the disease poison; as the effect occurs long before the disease could seriously modify the condition of the heart itself, individual idiosyncrasies will cause great variations in the character and persistency of febrile tachycardia. Broadly stated, persistent and severe it becomes a dangerous symptom, especially in pneumonia where it is indicative of failing heart power, particularly so when the heart is intermittent. In the third stage of meningitis it is due, according to Leyden, to paralysis of the pneumogastric, and has a fatal significance.

In the convalescent stage of acute diseases, it is due to a weak heart muscle, and diminished innervation of the heart and blood vessels.

Paroxysmal tachycardia consists of paroxysms of rapid action, when the heart may attain a rate of from 160 to 200 or over, lasting from a few hours to a few days. They may be caused by any influence disturbing the general health, or by nervous excitement or mental trouble, or without any discoverable cause. Bouveret describes idiopathic tachycardia, meaning a form due to functional nervous disorder. Clinically, we infer that it may be due either to temporary paralysis of the inhibitory nerves, or to irritation of the motor centres, as therapeutically antagonistic measures will afford relief in different cases. These attacks will disappear of themselves. The prognosis is not unfavorable in the individual attack.

Brachycardia or slow pulse occurs in convalescents, certain mental disorders and nervous diseases, and may be temporary. Permanent slow pulse, according to Huchard, is due to sclerosis of arteries and bulbar ischæmia. Stokes attributes it to sclerosis of coronary arteries, but Leyden thinks this can be the cause only in a few cases.

Fraentzel is doubtful of the expediency of recognizing a brachycardia, but thinks it due to coronary sclerosis and consequent defective nutrition of the heart muscle.

Palpitation is a familiar form of accelerated heart's action, due to various reflex influences, psychical and mental, and is generally too evanescent to admit of paralysis of vagus as a cause. In this country it is a frequent symptom of the irritability of the American nervous system. The great disproportion between the amount of mental and physical labor performed by the average man or woman, together with the utter disregard of all the laws of dietetics and total ignorance that the stomach may protest its abuse in more ways than one, combine to make the American heart particularly liable to this functional disturbance. The tachycardia of exophthalmic goitre is so closely related to the other classical symptoms of the disease, that it is not proper to take up its discussion here, and our present knowledge of the pathology of this disease is not sufficient to fully explain it, though Sansom's term of cardio-vaso-motor disease is more in accordance with both clinical and pathological conditions, than the term which is at present employed.

In relation to these various forms of rapid action, we must bear in mind that the actual amount of resistance to be overcome by the heart is not increased, that it probably accomplishes no greater amount of work. Therefore there are not the same changes to be found in the organ itself, as in those instances where the resistance to the emptying

of the cavities is increased. At the same time, long-continued rapid action is likely to destroy the integrity of the heart, even though there be no macroscopical change in its structure.

While our physiological and pathological knowledge of the cardiac nervous system is not sufficient to allow of any special classification of the various forms of arythmia in accordance with definite pathological findings, still, the recent advances made in this direction, justify Fraentzel's assurance that investigation along this line will ultimately clear up certain nervous disorders of the heart.

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THE TREATMENT OF PLEURISY, PNEUMOTHORAX, INTERCOSTAL NEURALGIA AND PLEURODYNIA.

BY DR. J. M. DA COSTA.*

The treatment of acute pleurisy must depend largely upon circumstances; it is essentially symptomatic. When certain conditions exist, of which pleurisy is only a part of the morbid process, such as empyema, rheumatism, gout, septicæmia, etc., additional factors enter into consideration. The usual treatment of an ordinary case of uncomplicated pleurisy resulting from exposure to cold, varies somewhat with the stage in which the patient is first seen. Let us suppose it is during the first stage, the so-called dry or plastic. There exists pain and a general disturbance of the system; this pain is the chief early symptom of pleurisy. Nothing is as prompt for its relief as hypodermatics of morphine, beginning with a small dose,—by injecting near the affected spot the additional effect of local action is obtained; it is best to follow this by the application of large poultices. I am not a strong advocate of the use of the poultice in lung affections, and I do not believe in it at all in pneumonia; yet in pleurisy of superficial site, considerable relief can be obtained by the use of such an agent, changed every three hours and covered with oil-silk to retain heat and moisture. In addition, the steady use of opium in small doses, so that a moderate narcotic effect is continually obtained, is extremely serviceable. This can be obtained either hypodermatically or by the mouth. From the onset of the disease, the use of derivatives is indicated, the best being acetate and citrate of potash, and acetate of ammonia; by acting on the skin and kidneys, they promote watery discharge and lessen the tendency to effusion. For the same reason, digitalis, as a diuretic and controller of the circulation, especially if any cardiac excitement exists, is also indicated. When the pain has disappeared, there is no further use for opium, as there is scarcely ever any trouble from cough. When the effusion is well formed, stimulation of the emunctories into activity is desirable. Large doses of acetate of potash and digitalis, unless contra-indicated, should be employed; also a few remedies which will aid in the absorption of the effusion. Among these, one of the more potent is the restriction of diet. The patient should be kept on the so-called solid diet; that is, given any solid, digestible food, but very little containing fluid, with scarcely any water to drink. In this way a better action of the drugs is obtained. Also, it is beneficial to use the bowels for this purpose; the sulphate of magnesia in concentrated form produces large, watery discharges; and I have seen many effusions disappear under such purgation, without the use of other remedial measures. If the effusion shows a tendency to linger, and is not as readily absorbed as it should be, it is better to try other absorbents and diuretics. Potassium iodide is the most worthy of trial for this purpose, acting also as a diuretic. Caffeine is also excellent, for although not certain in its action, when it does act, is quite effective. Scoparius, or its active principle sparteine, is often of benefit. We must not omit consideration of blisters, which seem to have the power of stimulating the part to renewed activity. It is by reflex action that internal absorption is set up, rather than the actual amount of liquid drawn out by the blister, which makes it beneficial. This is the common treatment for an ordinary case of pleurisy, one I have found of general benefit, from long experience.

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Certain constitutional combinations ocurring with pleurisy should be allowed to influence the treatment. In rheumatism or gout, colchium or salicylates should be employed in addition; and if any blood affection exists, muriate tincture of iron is invaluable. I will go further, and say that if in any case of pleurisy, pallor, constitutional depression, or weak pulse exists, iron, by its action on nutrition and the blood, tends to render the diuretics more certain in their action; consequently, Basham's mixture is a good combination to meet this indication.

In studying the treatment of chronic pleurisy, one learns this condition usually starts as an acute process which has never become absorbed, the more acute manifestations changing, gradually, to chronic conditions; or the pleurisy may be sub-acute or chronic almost from the start, its progress being slow and silent throughout. In either form the pleuritic membrane is very much thickened, irregular, full of exudation, and very frequently forms pus in abundance. This process may go on for months, even for years, and the thickening may reach half an inch, the sac becoming covered with lymph. The heart or liver is displaced, according to the location of the pleurisy, and the chest is enlarged; the physical signs are those of acute pleurisy in the stage of effusion. In a certain number of cases, in place of the prominence of the chest, the latter is bound down—contracted by the strong adhesions thrown out, honey-combed, as it were.

A most distinguished writer, studying the cases coming under his own experience, states that chronic pleurisy has the symptoms of remittent fever, of chronic diarrhœa, of consumption, and of gastric, heart, and liver disease; and this has been my own experience. To explain: I mean that there is no symptom significant of chronic pleurisy, but the cases come to one diagnosed as the above quoted writer points out; here there is hectic fever, cough, shortness of breath and anæmia; phthisis has been considered present, and so on. I would therefore lay this down as a rule, in obscure cases with obscure symptoms, where one does not know what is the matter: Think of chronic pleurisy. If one only examines the chest, it will be found one of the easiest diseases to recognize from physical signs; they are those of pleurisy with effusion. There are no positive signs whether the chest contains serum or pus. I have been deceived so often that I believe the only way to make a positive diagnosis is, to use a fine aspirating or hypodermic needle, and remove a drop or two of the contents of the chest. The length of time that the fluid has been in the chest is no positive factor; for example: I tapped a case recently in which fluid had been in the chest for over two years, and found pure serum; while in a case which had only had the symptoms of effusion for eight weeks, I found pus. As a general rule, however, if a case has fluid in the chest, existing for more than six months, it is apt to be purulent. Again, the temperature range is not always indicative of the presence or absence of pus. Bacelli, a distinguished Italian physician, has pointed out a physical sign which is of no little importance in deciding this matter; it is this: If fluid exists in the chest with absolutely no vocal vibrations, with complete absence of fremitus to the touch, it is likely to be pus, as the thicker fluid stops more successfully the vibrations. To distinguish chronic pleurisy from chronic consolidation of the lungs, the so-called chronic pneumonia or cheesy degeneration, it is well to remember that generally, in chronic pneumonia, the chest is retracted, hence only in those rare instances of chronic pleurisy where the chest is retracted is there doubt. In chronic consolidation there is distinct bronchial breathing, the dullness on percussion is not so absolute, and the voice sounds are well transmitted.

The prognosis of chronic pleurisy is, as a rule, favorable, if not too long existent, and the system is not too greatly undermined; of course this is not true of tubercular pleurisy.

The treatment is: First, try to get rid of the accumulated fluid, by means of potassium iodide, Basham's mixture, blisters, iodine to the chest, dry diet and purgatives —the same as for effusion where no active treatment has been tested: Second, the question arises as to how long we should let an effusion go on before adopting surgical interference. I believe, as a rule, there is danger of considerable compression of the lungs, if the effusion is allowed to remain

after three months of good active treatment. If I see a case of chronic pleurisy in which no treatment has been pursued, I devote six or eight weeks to the application of remedies whenever I believe the contents are serous; but if I believe the contents are purulent, I am not willing to wait a single day, not even an hour, for their removal. Tapping the chest has grown to be an ordinary operation, too ordinary I fear for its after results. The French physicians believe there is a great tendency for fluid to re-accumulate after tapping, and also to become purulent. I believe it is better to tap repeatedly in purulent cases, than to insert drainage tubes and wash out the chest with antiseptics. With the German clinicians, I believe excision of a rib or the introduction of a large trocar, is better than aspiration when a large vent is needed for the pus. I do not believe in washing out the chest with antiseptic solutions; or if it is done, it must be performed very cautiously, for fear of the absorption of the antiseptic and consequent poisoning of the patient.

Pneumo-thorax is the perforation of the pleura from the lung with the accumulation of air and fluid, and is generally due to softening of the lung and sloughing of the pleura, hence most commonly is produced by tubercle. The lungs are compressed as in a pleural effusion, only to a far greater extent. There is only one symptom which belongs strictly to a pneumo-thorax, viz.: The rapidly developed and intense dyspnœa. In cases of phthisis there is suddenly an uneasy feeling as if something were giving way, and the patient immediately has a struggle for breath. Gradually the lung grows accustomed to this compression, and the breathing is principally with the other side. The physical signs are marked: Over the site of the perforation there is extreme clearness on percussion, tympanitic, even amphoric resonance; on the other hand, at the lower portion where the effusion exists, the dullness is in marked contrast with the resonance above; the chest is extremely distended, the intercostal spaces effaced. It is because of this mixture of air and water that we get the peculiar sound on shaking the patient which is obtained under no other circumstances, the so-called succussion sound. Historically, this physical sign antedates all other phenomena of auscultation, as it was known even to Hippocrates, and is absolutely characteristic of pneumo-thorax. On auscultation the signs vary: If the opening is closed, there is absence of breath sounds; if opened, air pours in, producing cavernous breathing in its highest development, characterized by a loud, hard, harsh sound, the so-called amphoric or metallic breathing. Under similar circumstances, there are other metallic phenomena; water dropping from the upper part of the cavity gives a strangely marked metallic tingle; the voice resounds with the metallic echo.

Extreme dilatation of the stomach sometimes produces succussion phenomena, and occasionally a metallic tinkle as a bubble of air bursts here and there, but there is no extreme dilatation of the chest, no abnormality of the breath sounds, no dullness below with tympany above; moreover the gastric phenomena would call attention to the stomach.

People get well of pneumo-thorax. I have had cases make absolute recovery; after being converted into an ordinary pleurisy, the pleural effusion ultimately disappears. However, most cases do not end so favorably, occurring as they do in conjunction with pulmonary consumption. The first thing to do in the way of treatment is, to relieve the dyspnœa, which I may add is a most difficult thing to do. Opium hypodermatically has good effect occasionally; Walsh suggested cannabis Indica, which I have found sometimes of benefit; in other cases dry cupping produces relief. When the dyspnœa becomes excessive, so as to threaten life, I believe in aspiration, as in this way we gain time, and have more hope of converting the case into one of ordinary pleurisy, which we can cure by the aid of diuretics and other treatment. I do not believe that aspiration, while the lung communicates with the pleura, produces as good results as when the opening is closed.

There are two diseases of the walls of the chest of which I wish particularly to speak. One of these is pleurodynia, a vague term for a vague trouble, and that generally refers to pain in the muscles of the chest, not in the pleura. Its common cause is mus-

cular rheumatism; sometimes it follows a strain, being a myalgia or muscle-pain. It is readily recognized; is apt to be both sided. While there is painful respiration, there are none of the physical signs of pleurisy. The treatment is simple, consisting in the employment of heat, hot water baths, hot bags of salt; if rheumatic, the salicylates, potassium iodide, diaphoretics, and hypodermatically, morphine. If it is a muscle-ache, use some stimulating liniment containing chloroform or turpentine.

The other affection of the chest wall is, intercostal neuralgia, and almost invariably left sided, occurring, nine cases out of ten, in women; I will go still further and say that in the very large proportion of cases, say six out of nine, it is associated with some disorder of the pelvic viscera; it has a close connection with the disorders of the uterus. It is easy of diagnosis, however, as there are no physical signs except perhaps a little less breathing on the affected side. It is confined to the course of a few intercostal nerves, generally in the middle of the thoracic region; there are generally three painful spots in the course of these nerves, one where the nerve leaves the spine, one in the region of axilla, and the third where the nerve emerges at the sternum. This is in accordance with the more modern idea, that it is an intercostal neuritis rather than intercostal neuralgia. The prognosis is favorable, except when an aneurysm is the cause. The treatment consists in remedying the morbid condition underlying the neuralgic state, removing the uterine trouble, etc. For local treatment, the best thing is a blister, applied over the point of exit of the nerve from the spinal cord; have also had excellent results from the use of aconitine externally and internally.—I have made up one grain of aconitine to an ounce of oleic acid and applied this over the affected parts, gradually increasing the strength of the application to four grains to the ounce. I have also found administration of one two-hundredth of a grain by the mouth often secures admirable results.

Philadelphia, Pa.

JOHNS HOPKINS' MEDICAL SOCIETY.

Dr. Halstead, reported twenty cases of inguinal hernia, for which he had performed his original operation with the result of radical cure in each case. Ten of these patients were present; robust men since the operation, eighteen months ago; had worked on railroads, in foundries, as blacksmiths, and in the street; there had not been any indication of a return of the hernia. In each case a regular laparotomy was performed, the spermatic cord transplanted, and the peritoneum and abdominal walls sewed separately; no weakness whatever remained at or near the cicatrix.

Dr. Henry Thomas presented a case of alcoholic neuritis, simulating lateral sclerosis. The muscles of both arms were weak and atrophied. He had wrist-drop, pain in the arms, numbness of the fingers which were contracted and assumed almost a typical "claw-shaped" attitude. The elbow-joint was rigid, the interossei muscles all atrophied. The Galvanic current produced the characteristic reaction of degeneration. The progress of the case was regarded as favorable.

Dr. Hoch reported a case of rhythmic chorea in a man aged 45 years, who, when first seen two weeks ago, was having rapid rhythmic spasms of the trunk. His gait was hemiplegic, the muscles of his right leg and arm weak. One week later he again presented himself at the dispensary, with the spasms greatly increased; had no fever, no heart murmur; only the muscles of the right side of the chest were especially affected. Twice before had suffered the same affection, once after long exposure to wet and cold, and once after great fatigue. Both times he had kept his bed, suffering with pain in back and limbs. Admitted to the hospital Feb. 9th; no medicine given except tr. card. comp. Within four days he could walk without a jerk; the hemi-anæsthesia was less marked, and he was perfectly free from twitching.

This chorea is common in soldiers, and differs from Sydenham's chorea in, (1) being confined to the trunk, (2) in its rhythmic character, (3) in the hemi-anæsthesia and,(4) the equal vision.

Dr. Berkley read a paper on tetanus in-

cipiens, describing the disease from a histological and pathological standpoint, having proved to his own satisfaction, from experiments on animals and stained sections of the brain and cord, that the disease is due to a staphylococcus affecting the vascular tissue mainly, causing leptomeningitis and local neurites.

Dr. Welch questioned whether the lesions were the cause of the choreic movements, and whether the infection was from a specific germ, a variety of germs, or from a chemical poison resulting from the action of germs on the central nervous system.

Dr. Osler asked if the chorea in children which follows a fright could be assigned to this same germ-cause; he suggested that the germ of endocarditis might migrate to the nervous system and produce the choreic movements. In ninety autopsies in a hundred choreics, endocarditis was found, giving a higher figure than even in acute rheumatism.

Dr. La Fleur reported a case of aneurysm of the aorta. The patient, colored, when first seen was suffering from dyspnœa and signs of intra-thoracic pressure. On admission to hospital, Feb. 12th, was dyspnœic; coughed frequently; respirations 36; pulse 123; heart sounds negative; lungs clear except at mid-sternum; sonorous rhonchi over entire chest; veins of neck distended. Previous history good; no signs of syphilis; patient had suffered from an attack of acute rheumatism.

For the relief of dyspnœa, morphine was given; the next day he could lie in bed with apparent comfort. He died suddenly on the 16th. At autopsy, Dr. Welch found aneurysm of arch of aorta, the size of a hen's egg, projecting to the right of the trachea, and containing a small amount of laminated coagulum. Near it was another aneurysm, as large, perhaps, as a split pea. This was very interesting as a study of the commencement of aneurysms. In other parts of the aorta were found arterio-scleroses and plates of fatty and calcareous material. At the site of commencement of the new aneurysm, was a well marked patch of atheroma. The large aneurysm had pressed upon the superior vena cava, but had not encroached much on the trachea. There was an interesting anatomical formation at the arch of the aorta. Near the origin of the innominate, the arch split into two parts, between which the trachea passed, a condition undoubtedly due to failure in development. As the patient was just at the age when the arteries begin to weaken, and the fibres being weaker at this spot, some over-exertion undoubtedly was the immediate cause of death.

There was also extensive pneumonia of the lower lobes, a wide-spread *aspiration pneumonia*, and a slight hypostatic congestion.

The lymphatic glands contained opaque, sharply defined, caseous masses; Miller's capsule was thickened. Also there was hyaline nephritis, and arterio-sclerosis of the arteries of the kidneys, originating probably from a deposit of the hyaline material on the intima of the arteries.

BALTIMORE, Feb. 18th, 1891.

CHICAGO ACADEMY OF MEDICINE.

Regular meeting, January, 1891; Dr. G. C. Paoli, President, in the chair.

Dr. G. Frank Lydston reported the following cases, and exhibited specimens.

TUBERCULAR TESTICLE.

I have here a very beautiful specimen of a tubercular testicle, the history of which was to me very interesting. The patient had had a gonorrhœa, which was neglected, and, secondary to it, epididymitis developed. The induration, instead of resolving as usual, underwent suppuration, and an abscess developed, which lasted about a year. This had been probed, cauterized, and cut, times without number, but to no purpose. Shortly before I saw him—he thought it was about three months—he began to run down appreciably in general health, and developed a cough. When I first saw him, there was peri-bronchial deposit, and evidence of incipient phthisis at the apices of both lungs. He was hectic, had night-sweats, and had lost about thirty pounds. I advised immediate removal of the testicle, and within two months after the operation, the patient had gained more than the amount of flesh he had lost; the night-sweats stopped within a few weeks, and at the end of six months his

cough had disappeared entirely, and the lungs cleared up perceptibly. I then advised a change of climate. He went first to Colorado, then to Southern California, after which he returned and again called to see me; as far as I could determine, there was absolutely no evidence of pulmonary trouble. At this time he called my attention to the fact that there was a little hardening of the remaining epididymis. I examined it, and found that there really was a little induration. This did not go on to suppuration; but the complaint of the patient was, that while he was more potent, more virile, than prior to the removal of the diseased testicle, he had now no emissions of semen. At the present time he can copulate just as well as anyone—indeed, he is exceptionally amorous—but there is never the slightest trace of semen. The organ is perfectly normal. I consider the case an interesting one as showing the relation of the disease in the testicle to constitutional infection. The specimen I have is an interesting one. We have all seen cavities in tuberculous lungs that have much the same appearance as this specimen. I neglected to state that tubercle bacilli were found in the abscess.

UTERUS AND APPENDAGES FROM A CASE OF CHRONIC CHLORAL POISONING.

The next specimen I show you is interesting. The case is an illustration of the carelessness of some physicians in recommending the use of narcotic drugs without proper supervision. This was a case of epilepsy that developed in a young girl at about the age of puberty. There had been no injury, and there was nothing to account for her condition. There was possibly an element of heredity in the case, as the father has since died of diabetes, and her mother was very neurotic. I do not think there was any disease of her sexual organs to account for the epilepsy. She went along for a number of years, suffering from attacks from time to time, till she fell into the hands of a celebrated neurologist, since deceased, who recommended chloral. After a while the physician allowed the friends of the patient to give the chloral just about as they pleased. When I first saw the patient, she was taking about one hundred grains a day, which was not as much as she had been taking. When I was first consulted, the patient was bed-ridden and a mental wreck; she presented as characteristic a case of hystero-epilepsy as one could wish to see. For a long time prior to her death, her mental faculties were entirely destroyed.

On post-mortem, I found the uterus and ovaries markedly atrophied. I should have stated that menstruation ceased some months before the case came under my care.

The case is interesting with respect to the possible effects of chloral; I think it was the chloral that brought about the fatal result. Dr. Clevenger, who saw the case with me, and kindly examined the brain, agreed in this view. The Doctor said he had never examined a brain in which the veins were more turgid and congested. The brain was greatly degenerated, and there was a considerable amount of sub-arachnoid fluid.

As one of the possible effects of the prolonged use of chloral on the sexual organs, some therapeutical authorities predict atrophy of the ovaries. Specimens of this kind are rare, and it would be difficult to say how far the condition was due to the action of the chloral. I have had no experience which could enable me to throw much light upon this particular point.

FUNGATING CHANCRE.

Here is a specimen I hardly know how to name. I have called it vegetating or fungating chancre, for want of a better term. The patient, four months before I saw him, contracted chancre, and was overdosed with mercury for several months. He finally consulted Dr. Quine, who referred him to me. When I saw him he was considerably run down in general health; the prepuce was phymosed, and presented the peculiar growth which we see, the result evidently of degeneration and transformation of the chancre. It resembles very strongly a malignant growth. I think that we have all seen cases of epithelioma which looked like it. There is one interesting feature of the neoplasm, and that is its tendency to shell out, so to speak, from the surrounding tissues. I have noticed this on a number of occasions in malignant growths.

I remember a case of encephaloid of the cheek and jaw, which came under my observation during service at the New York Charity Hospital, in which that very particular phase of the tumor was well marked. I circumcised in the case under consideration, and after the growth was removed the individual's general health improved a great deal, the wound having healed very kindly. There was one point where I left a small flat vegetation, independent of the growth, on the under surface of the glans, near the frænum. This vegetation was small and sessile, and did not appear to amount to much, as it had the appearance of those simple vegetations which we see under a phymosed prepuce, where the mucous membrane has been irritated for a long time by filthy secretions. I thought cleanliness would result in its disappearance, and I did not care to cauterize as there was a flesh wound in the immediate vicinity. By and by the vegetation suppurated, and four or five small openings appeared, yet it still had the appearance of an ordinary vegetation. At the end of about three months, however, there was a small indurated tumor, that presented much the appearance of a hard chancre, at the site of the vegetation. I excised this, and found it was quite spongy in consistence, and perforated by sinuses that exuded pus. The wound healed perfectly. After about a month, another indurated growth appeared which exuded pus, and on tracing up a small sinus I found that this secondary growth was the result of a chronic urethral folliculitis. The patient was perfectly healthy otherwise. The microscope showed no evidence of malignity. There is no question but that the original trouble was a hard chancre. The patient is unmistakably syphilitic. The recurrent trouble I believe to have been entirely independent of the growth which I excised, aud due to the irritation of pus from a peri-urethral follicle which had undergone suppuration. As the patient had a gleet dependent on a stricture, the folliculitis was easy explained. The specimen, you will observe, is not at all like the ordinary venereal vegetation.

PAGET'S DISEASE.

The specimen I now present I also consider an interesting one. I regret that I have not the microscopical expertness necessary to give a complete presentation of its histological features. I shall turn the specimen over to Dr. Moyer for microscopical examination. I believe that we have here a case of what is essentially Paget's disease. I think I am warranted in asserting that it is the same affection Sir James Paget described as attacking the nipple in females. —a peculiar form of epithelioma which is preceded by an eczematous patch. There has been one case, I think, recorded in Italy in which the same process attacked the scrotum. It is the only one on record, unless this be a case in which this peculiar form of epithelioma appears anywhere but on the nipple.

This growth appeared on a gentleman in this city, who had had a pigmented mole on his shoulder all his life, and this happened to be situated at a point where it was chafed by his suspender. After a little time a patch appeared at the base of the mole. This grew thick and scaly, and slightly stiffened, just as though it were a piece of wash leather. He had himself noticed the gradual increase of the area of thickening. The process went on, and finally the base of the mole began ulcerating, and at the time he presented himself the growth had all the clinical appearances of an epithelioma. Under the microscope the characteristic epithelial nests were found. It has been claimed that there exists in the so-called Paget's disease a peculiar and characteristic body that Darier has termed the *psorosperm*. The psorosperm is a peculiar round, colorless, cell-like body, and, according to Darier, is a vegetable parasite; others claim that it is not parasitic in character. Whether it has any definite causal relationship to Paget's disease is a question. Darier classifies the various affections in which it occurs as *psorospermosis follicularis cutis*. The point that militates against the psorosperm of so-called Paget's disease is, the fact that a similar cell has been discovered in several other affections; in molluscum contagiosum there is an identical body. Cornil has discovered a similar cell in certain cases of uterine cancer. As far back as 1876, Malassez demonstrated similar bodies in various forms of epithelial growths; so it is a question as to the precise

causal relation of the psorosperm to Paget's disease. As Sir James Paget knew nothing about psorosperms when he classified his peculiar form of epithelioma of the nipple, I am privileged to believe that this is precisely the same affection he described, there being only a difference of location. I fear that it is too late to detect the psorosperms in this specimen even if they are present, but Dr. Moyer thinks that they should be visible even though the specimen is not fresh. As it has been kept in alcohol, it is possible that the tissues are in excellent condition for section.

REMOVAL OF UTERINE APPENDAGES FOR OVARIAN HÆMATOMA AND SALPINGITIS.

These are the appendages removed from the wife of a St. Louis physician, who until recently was in active practice in that city. For five or six years she had had all the symptoms of chronic pelvic peritonitis, and several distinguished St. Louis physicians diagnosed her case as pyo-salpinx. When she came to me, I also diagnosed the case as probable pyo-salpinx. No definite tumor could be mapped out, but at the same time there was a good deal of tenderness in the region of the ovaries. She had had, at periodical intervals, severe and continuous pain in the left ovarian region. After a few days of this pain, there would be a profuse discharge of pus through the vagina, followed by relief of symptoms. She was so crippled that her life was absolutely miserable. Everything was tried—pessaries and uterine applications without number. She had a constant leucorrhœa, and pain on locomotion and coitus, and everything pointed toward pyo-salpinx, with occasional discharges of pus into the uterine cavity and through the vagina. The operation proved a difficult one in spite of the fact that there was apparently, as determined by vaginal examination, very few adhesions, and no induration of the pelvic floor. The appendages were adherent in all directions, showing old pelvic peritonitis. The left ovary was adherent to the intestines. I found that the Fallopian tubes contained very little fluid. Instead of finding them filled with pus, they were thickened from chronic inflammation, but only moderately dilated. Both ovaries were degenerated. The left one, doubtless the principal cause of the trouble, was in a peculiar condition. On splitting open it gave vent to a thin sanguineous fluid, characteristic of hæmatoma. Floating in the interior was a foreign body, which you notice looks like an orange seed introduced surreptitiously. This is probably composed mainly of hæmatoidin crystals and fibrin. There was no pus in the ovary.

The patient was discharged from the hospital at the end of three weeks. She is now (six weeks after the operation) able to walk about, considers herself perfectly well, and says she has walked more in the last three or four days than in several years.

There is one point in connection with this case I desire to touch upon briefly. It is a frequent experience that after abdominal operations there is more or less colicky pain that sometimes causes a great deal of annoyance. Once in a while patients have such severe colicky pains, that one is apt to think that peritonitis is developing. The pain does not usually come on for some hours after the operation. This patient was hardly off the table when excruciating pains came on, referable to the right ovary, which continued for three or four days; her suffering was so intense her husband foolishly gave her quite a quantity of morphia, hypodermatically, before I got back to the hospital. I suppose it was the chilling of the bowels that produced the colicky pains in this case. The operation was very tedious as a consequence of adhesions and extremely fat abdominal walls.

A NEW METHOD OF EMBALMING AND PRESERVING ANIMAL AND VEGETABLE TISSUES.

I have here a collection of material which, although not of a pathological character, may be interesting to the Academy. Some time ago a gentleman of this city, who has been experimenting in various methods of embalming, called my attention to a new preservative compound he had prepared. His statements as to its efficacy were, to say the least, striking, and I began some experiments with it, with what appeared to me extraordinary results.

The preparation is composed, as nearly as

I can learn, of some form of sulphur in combination with sassafras, cinnamon, and essential oils of various kinds. The peculiar process of combination I do not know. The compound has been analyzed by a number of different chemists, who say that sulphurous acid is one of the important factors in the process, but none of them have yet been able to produce the same results. I have reliable testimony to the effect that by this compound a body has been preserved for an entire year without a trace of decomposition. How much longer a body might be preserved, the inventor does not at present claim to know. Independently of authentic reports, I should be inclined to accept what he has claimed for the compound. If it will accomplish what it certainly has in the case of the specimens which I will exhibit, there is no doubt but, other things being equal, it will do the same in the case of the human body. A company has been formed for putting the compound upon the market, and it will be interesting as well as profitable for the demonstrators of the various medical colleges to give it a fair trial. I have suggested to the inventor, that the best method of procedure would be to give samples of the compound, with directions for use, to the demonstrators of all the medical colleges in the United States. In this way it can be brought before the profession in a proper manner.

I think I can confidently state that certain evils attendant upon the dissection of the human body will be entirely obviated by the use of this compound. There will no longer be danger from dissecting wounds if this compound be used for the preservation of the body. All of the noxious vapors characteristic of dissecting rooms disappear where this substance is used. My own personal recollection of the miasm of the dissecting room is not a pleasant one, and I know of many students who were unable to dissect for any length of time without becoming ill. If this compound be burnt in a dissecting room at night, the windows and doors being tightly closed, the room will be found the next day perfectly inodorous. Bodies dead of infectious or contagious diseases must, it seems to me, necessarily lose their noxious properties when treated by this process, as it is certainly a most powerful antiseptic. The method of its use is very simple. All that is necessary is a pint and a half of the compound, and a box sufficiently large to contain ten gallons of pure air; the body is placed in the box, which must be air-tight, on supports, so that the gas will circulate freely about it. The compound is then lighted, and the box closed for twenty-four hours. The combustion compound produces a vacuum,* consumes the vapors from the body, and the air and gases in the composition of the body are replaced by the antiseptic gas.

An extraordinary test was made with this compound. A floater, well advanced in decomposition, was taken out of the river. After having been treated with this compound, the body was placed near a furnace boiler, and kept there for about three months, during which time there was not a trace of decomposition or odor perceptible. If this process will accomplish such results with human bodies, it certainly must be a powerful disinfectant and antiseptic in rooms in which patients with infectious and contagious diseases have been confined.

I present a basket of fruit and several specimens of meat; they have been lying in my office on top of one of my cabinets for a month and a half. A week ago I took down this mutton chop to see whether the process had preserved it, as I naturally suspected that, if the outer coating was removed, decomposition would be found to have occurred upon the interior. Mutton decomposes very rapidly, and if allowed to remain for a short time in a room, will become tainted. I found on opening this chop, it was perfectly sweet.

Here is a piece of pork treated in a similar manner. Pork decomposes with greater rapidity than mutton; but this at the end of six weeks is perfectly sweet.

I saw some oysters the other evening that had been treated by this process several months before; they had dried down very much like Saratoga chips. One of these thrown into water and allowed to remain a short time, assumed precisely the appearance of a fresh oyster, and did not present a particle of taint. Eggs may be

*The Doctor doubtless means the compound induces displacement and substitution, instead of a vacuum.—Ed.

treated in the shell by this process, and will keep for months. I have here a couple of eggs so treated; they were broken in a glass, and remain without a particle of odor; as you see, they were dried down into a crystalloid.

I will state that this compound will be placed in the hands of the medical colleges for use in a very few weeks. Personally I should be pleased to hear their reports, whether confirmatory or otherwise of the statements made here to-night.

Dr. Harold N. Moyer: I would like to make a remark about the case of Paget's disease. So far as I know, Darier was the first (about two years ago,) to describe the so-called psorosperm; though those before him had described organisms, not one had the characteristics pointed out by him. The peculiarity of these psorospermes lies in this: Their size is somewhat larger, perhaps twice as large, as the young epithelial found in the deeper layers of the rete mucosum. To detect them, very fine sections should be rapidly passed through ammonia of 15.9 Baumè, washed in water, colored for five minutes in a concentrated alcoholic solution of safranin; then partially decolorized in acetic acid, washed in water, and the decolorization continued in alcohol until the sections have a rosy tint; then immerse in oil of cloves, xylol, and balsam. A double coloring may be obtained with fluorescin or hæmatoxylin. When hardened in alcohol, the psorosperm presents a peculiar appearance, the outer portion having a double contour that indicates a distinct capsule. Within this the protoplasm is retracted, but here and there prolongations are attached to the investing membrane. There is no cell where these are ordinarily found that presents anything like this appearance.

Darier found these cells in Paget's disease, but the crucial test, inoculation, has never been made. He attempted inoculation upon his own person, and failed. He attempted it on animals, also cultivation upon various media; he thought he had obtained something of a growth in sterilized moistened sand, but was not quite sure of it; so the ætiological relation of the psorosperm is not definitely determined.

There is one thing about Dr. Lydston's case, and that is its occurrence upon other portions of the body. So far as I am familiar with the literature of the subject, there is only one other case in which the disease has been found on other portions of the body than the breast; that is the one, as the Doctor has said, in which the disease is described as occurring on the scrotum. In this particular case it was demonstrated that these peculiar organisms were present. I should like (with the Doctor's permission) to make sections of the specimen for further study.

Dr. Frank S. Billings: Dr. Lydston spoke of one of his tumors as an epithelioma. I will say that the term is generally mistakenly used in medicine for the cancroid cancers, and, as the Doctor says, cancers characterized by nests. All cancers are epithelial. By a cancer we understand a misplacement of epithelial tissue, developing out of its physiological form. The word epithelial is applicable to the whole class. I object to the use of the term entirely for this one class, which should be called according to their genesis, epidermoid cancers — epidermoid because they are made up essentially of epidermoid tissue.

THE LATEST REMEDIES FOR TUBERCULOSIS.

Each week heralds a new remedy for tuberculosis. The latest are:

Prof. Leibreich's method by injection of cantharidate of potash in doses of two decimilligrammes.

Dr. Bernheim, of Paris, is treating tuberculous patients by transfusing the arterial blood of the goat into their veins.

MM. Hericourt and Richet have published the results obtained by the injection of the serum of dog's blood in doses of 1 to 4 c. c. every three or six days.

Recently, before the Section in General Medicine of the New York Academy of Medicine, Dr. J. B. White read a paper on the therapeutic value of gold and manganese when subcutaneously administered to patients suffering from pulmonary or other forms of tuberculosis. He makes use of a solution each drop of which represents one-fiftieth of a grain of some salt or salts of the metals. For injection, one or two drops of this are added to five or ten minims of a one-per-cent. solution of carbolic acid.

All these experimenters claim favorable results.

Correspondence.

MEDICAL PRACTITIONERS PROTECTIVE ALLIANCE.

Dr. J. H. DeWolf, 1600 Franklin St., Baltimore, Maryland, who has before announced his plan for establishing a physician's alliance now states that such an association has been organized, and is entitled, "The United States Medical Practitioners Alliance." The officers of this association are: Founder, Dr. J. H. DeWolf; President, Dr. W. H. Crim; First Vice-President, Dr. W. V. Wilson; Second Vice-President, Dr. Geo Chaffee; Secretary, Dr. J. F. Davison; Treasurer, Dr. R. B. Elderice.

Dr. DeWolf makes the following appeal for further membership:

"'Big oaks from little acorns grow.' I have planted the acorn, and desire you to help its growth by joining the Protective Alliance. If by indifference or neglect, you will not now join, you render it difficult to make the start with the high class practitioners this Alliance is endeavoring to secure. The fee of $3.00 for the first year is not high; the benefits will commence as soon as the Alliance has sufficient members to enable it to demand of the legislatures changes now so urgently needed. It is to the advantage of yourself, and family, to unite with us."

Those desiring to join, or wishing further information may address, enclosing stamp, the corresponding secretary, Dr. J. F. Davison, Glendola, N. J.

HARPER HOSPITAL, DETROIT—SELECTION OF HOUSE STAFF.

Heretofore it has been the custom of this hospital to select its house staff from among the graduates of the Detroit College of Medicine. At a late meeting, the Board of Trustees decided to throw open these positions to universal competition to the graduates of all medical schools.

The hospital is a large one; has attached to it a lying-in department, and a contagious hospital and polyclinic; and opportunities for study and work are large and varied. The exact date of the examination has not been fixed, but will probably be during the first of April. Of those applying, the best fitted will receive the appointments. Those desiring to compete should communicate with Dr. E. L. Shurley, who will give full details.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor

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Editorial.

MEDICAL SUBJECTS IN RECENT WORKS OF FICTION.

Zola has received some praise for the success with which he has treated medical subjects in his writings. Some chapters pertaining to topics properly obstetrical, as for instance a scene in his "*La Joie de Vivre*," where the operation of version is minutely described, show a considerable familiarity with the *technique* of the profession. This same writer has given in the same book quite a true picture of the first symptoms of puberty in a young girl, and the influence of the developing reproductive system on the character. When he writes of diseases, the general course, the effect of medicines, of poisons, etc., he generally keeps within the bounds of possibility, if not always of probability.

Georges Ohnet also belongs to the "realistic school." He is not so fortunate in handling medical topics. The heroine of a story for instance ("Love and Pride"), after a matrimonial quarrel, shuts herself up in a room falls into worry and agony of mind, fails to sleep, and develops a severe attack of meningitis; the disease is attended with a tremendous fever, with weak, rapid pulse, delirium, "divergent squint," and finally coma; then the patient gets well at the proper time. All this, of course, is not true to real life. Worry and excitement, and loss of sleep will, in a high strung woman, bring on hysteria and nervous prostration, but not (or indeed very rarely,) *meningitis;* if meningitis should come on and develop coma, we should say that such a patient, if at all, would be saved by a miracle.

The hero of another of Ohnet's stories

wins his wife in consequence of a skillful operation on her mother, consisting in amputation of a *gangrenous carbuncle* on the back of the neck; this had encroached on the carotid artery, and been mistaken for rheumatism: This lady loses her religious convictions because the doctor (her husband) would not go to mass and pray to the Virgin; moreover, though a very celebrated and successful physician, and a model of correct living, he was "an atheist," "a materialist," and "a free thinker," besides a "democrat" (sic), and the design of the work is to show the dreadful effects of his peculiar beliefs on his family, and on his own happiness.

We have no disposition to advertise "Dr. Rameau," in mentioning the name of this book, and have no sympathy with the kind of sentimentalism which underlies it. "Dr. Rameau," is a forcibly drawn, but highly exaggerated, distorted, and in many respects, impossible character. The least we can ask of novel writers who aim to be realistic is, that when venturing upon medical or surgical ground, or hitting off the short comings of medical men, they should be true to Nature.

STILL ANOTHER REMEDY FOR TUBERCULOSIS.

Whatever may prove to be the value of Koch's investigations of the injection of "tuberculin," his claims for it have served to greatly stimulate research.

Despatches from Berlin announce that Professor Liebreich, in conjunction and with the approval of Virchow, is using in tuberculosis, by the epidermic method, a solution of the potassium salt of cantharidic acid, or cantharidate of potash.

It is stated that Liebreich's remedy is not bacteriological, but pharmacological, and can be easily prepared at a price which will make it available for the poorest. Further, its administration is not followed by febrile or other mal-reaction.

It is reported that the method of use is to be communicated later, and Prof. Liebreich is actively pursuing his investigations, although it is as yet premature to announce results.

Clinical experiments by Drs. Fraenkel and Hermann are claimed to confirm Liebreich's experience of the utility of this agent in laryngeal and pulmonary tuberculosis.

TRANSPLANTATION OF TISSUE FROM LOWER ANIMALS TO MAN.

The case of bone transplantation at Charity Hospital, Blackwell's Island, New York, which has been so widely commented on by the daily press, to some degree illustrated the future possibility of the transplantation of tissue from the lower animals to man.

Dr. A. M. Phelps, by whom the operation of bone transplantation was attempted, gives in the N. Y. Medical Record, Feb. 14th, a simple statement of the facts relating to this case, which have previously been so much distorted by the imagination of the newspaper reporters.

Although transplantation of bone is not a new operation, its novelty in this instance consisted in the method employed. The fact that perfect union was not secured, and the operation therefore a partial failure, does not militate against further attempts and ultimate success in achieving the purpose sought.

The hue and cry raised by the anti-vivisectionists and cruelty to animal associations, was to have been anticipated, and this element can never be brought to appreciate the fact that apparent cruelty to animals may be real humanity to man.

TOLSTOI ON THE ETHICS OF WINE DRINKING AND TOBACCO SMOKING.

Count Leo Tolstoi has told us, in the Contemporary Review, under the caption of "The Ethics of Wine Drinking and Tobacco Smoking," why so many of our fellow-mortals resort to tobacco or the wine cup. It is not to drive away melancholy and keep up the spirits, but to benumb the conscience! Here you have the explanation in the fewest possible words: "It is only necessary," he says, "to analyze more carefully than is the wont, the conditions under which a peculiarly strong craving for tobacco manifests itself, to acquire the conviction that brain-clouding by means of tobacco fumes, like brain-clouding by means of alcohol, exerts a direct action on the conscience, and

that the need for this kind of stimulant is peculiarly intense precisely when the desire to stifle the voice of conscience is at its height." Tolstoi goes to the annals of crime for proof of this proposition. Almost all gamblers are smokers; the same may be said of courtesans and of the insane. Boys begin to smoke when they have lost the innocence of childhood. People addicted to smoking leave it off when they have raised themselves to a higher moral level.

There are nearly twenty pages of this kind of discourse—drivel, some would call it.

Leo Tolstoi is a favorite (and we may add, very erratic) novel writer, and has posed as a philosopher, moralist, and especially as an interpreter of gospel ethics. Some of his novels might be supposed in accordance with his theory, to have been written when the author's conscience was stifled with tobacco smoke, at least, their ethical utility has been seriously called in question.

The medical profession has contained many notorious sinners, according to Tolstoi's estimate. What multitudes of our Continental *confrères* use the conscience-enervating weed and some kind of alcoholic intoxicant? Even the English medical man loves his bottle of claret along with his roast beef, and indulges in the mind-obfuscating cigar afterwards. We fear that some even of our American *confrères* would plead guilty to similar indulgences!

We go farther and own (as facts compel us) that some of the lights of our profession have been great smokers, and that it is not an uncommon thing to find a bottle of wine on their dinner-table. To what depths of moral degradation must they have sunk!

We believe, also, that some of our best soldiers have been inveterate smokers; and in all the walks of life, among the good, bad, and indifferent, we find men who, it seems, have deliberately resorted to smoking or drinking.

THE NEXT MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

William B. Atkinson, Permanent Secretary of the American Medical Association, has issued a bulletin of information regarding the next meeting.

From it we learn that the forty-second a nual session will be held in Washingto D. C., on Tuesday, Wednesday, Thursda and Friday, May 5th, 6th, 7th, and 8th, con mencing on Tuesday at 11 A. M.

The following amendments to the By-Law have been offered, and will be considered this meeting:

Offered by Dr. A. L. Gihon, United State Navy:

That the first day of the meeting of this Associ tion shall be the first Monday of May or June r spectively, instead of Tuesday.

By Dr. X. C. Scott, Ohio:

That the Committee on State Medicine be abo ished, inasmuch as the Section on State Medici occupies the entire ground.

By Dr. E. A. Wood, Pennsylvania:

That the word Physiology be stricken from Se tion 1, and that a new Section, entitled the Sectio on Dietetics and Physiology, be formed.

By Dr. J. C. Culbertson, Ohio:

That the State and Geographical District So eties in affiliation at this time with this Associatio having a membership of 100 or more, shall be re ognized as branches of the American Medical A sociation.

That all members of said Societies enjoy all th rights and privileges now accorded to delegates.

By Dr. Wm. H. Daly, Pennsylvania:

That in future the permanent members have a the rights of delegates.

Secretaries of medical societies are earn estly requested to forward, at once, lists o their delegates.

Also, that the Permanent Secretary ma be enabled to erase from the roll the name of those who have forfeited their membe ship, the Secretaries are, by special resolu tion, requested to send him, annually, a co rected list of the membership of their respec tive societies.

The address on General Medicine will b by Dr. E. L. Shurly, of Detroit, Michiga on General Surgery by Dr. Jos. M. Mathew Louisville, Ky.; on State Medicine by W. I Schenck, Topeka, Kansas.

Among the questions that will receive fre discussion, is that of the removal of th Journal of the American Medical Associatio from Chicago to Washington.

The Chairman of the Committee of A rangements is Dr. D. D. C. Patterson, 919 St. N. W., Washington.

Washington has become a very popula place for holding medical and pharmaceut cal associations, and is a most interestin city to visit. There should therefore be good representation of members from all sec tions of the United States, and a satisfactor meeting scientifically and socially.

Book Notices.

HE SOUL OF MAN. By Dr. Paul Carus. Cloth, 12mo.; pp. 480. Price, $3.00. Published by the Open Court Publishing Co., Chicago.

This work treats of the most salient psychological problems, presenting them in their connection with philosophy, physical science (including mechanics), physiology, experiental psychology (hypnotism, etc.), religion and ethics. The physiological chapters of the book are profusely illustrated, so as to economize time and save the patience of the reader, who will find the most important facts and results of scientific investigation that have reference to the activity of the human soul, collected and systematically arranged in a comparatively small space and handy shape.

Dr. Carus discusses the psychological problems from the standpoint of positive monoism, at present the almost generally accepted view in philosophy and science. The statement of his position is made very clear, even pronounced. Yet this does not restrict the usefulness of the book to those readers alone who will accept his views. The mere collection of materials, which can nowhere be found so conveniently compiled and presented, will make the book welcome to all who are interested in psychology, however widely their opinions may differ from those of the author.

As to the importance of psychological topics, no one can deny it. It has been truly said that knowledge is power; and knowledge of the human soul is power to everyone who has to deal with men. Dr. Carus says:

Psychology is a study too much neglected; it is indispensable for every one who has to deal with people; and who has not? the physician, the clergyman, the employer of labor, the officer in the army, the professor, the merchant, the banker, almost every one has to deal with people, and, above all, the lawyer. Self-knowledge is not sufficient to make us free, it must be self-knowledge *and* the knowledge of other people; it must be self-knowledge in the broadest sense, knowledge of the soul, of the motives that work upon, and can be employed to affect, man's sentiments. It is only knowledge that can make us free; and knowledge will make us free. And because it makes us free, knowledge, and chiefly psychological knowledge, is power.

SCRIBNER'S MAGAZINE for March contains:

"The Musmee" (Frontispiece), drawn by Robert Blum, engraved by Henry Wolf; "Our March with a Starving Column," by A. J. Mounteney Jephson, of the Emin Pasha Relief Expedition (to be followed by a second paper in the April number), illustrated by Frederic Villiers; "In Early Spring," by Edith Thomas; "The Half-White," by Mrs. Robert Louis Stevenson; "London and American Clubs," by E. S. Nadal, illustrations by O. H. Bacher, W. L. Taylor, W. C. Fitler, J. D. Woodward, and from photographs; engraving by E. H. Del'Orme, Paul Del'Orme, C. I. Butler, W. B. Closson, H. Baker, and Bodenstab; "My Friend," by Arthur Sherburne Hardy; "Jerry,"—Part Third, Chapters XI–XII (begun in June, 1890—to be continued); "Japonica,"—fourth paper—Japanese Ways and Thoughts, by Sir Edwin Arnold, illustrated by Robert Blum; "A Blue-Glass Puritan," by W. H. Woods; "Paraphrase of Horace IV, 7—To Torquatus, by Donald G. Mitchell;" "The Ornamentation of Ponds and Lakes," by Samuel Parsons, Jr., Superintendent of Parks, New York; illustrations by John H. Twachtman, J. D. Woodward, and Victor Pérard; engraving by Peckwell, Van Ness, and White; "Mount St. Elias and its Glaciers," by Mark Brickell Kerr [as explored by the National Geographic Society's Expedition of 1890]—illustrations by J. D. Woodward, Victor Pérard, and W. C. Fitler; engraving by T. H. Heard, C. I. Butler, Van Ness, and Geo. Del'Orme; "The Wooing of Monsieur Cuerrier,"—A Sketch in Viger, by Duncan Campbell Scott; "A Note on Jane Austen," by W. B. Shubrick Clymer; "Youth and Age," by C. P. Cranch; "The Other Woman," by Richard Harding Davis; "The Point of View;" "The American and Country Life;" "Passport to Posterity;" "Form and Substance;" "A Mystery in High Life."

WOOD'S MEDICAL AND SURGICAL MONOGRAPHS. Vol. ix, No. 2. February, 1891. Paper, 8vo.; pp. 245. Price $1.00. Published by William Wood & Co., New York.

This contains: "The Clinical Use of Prisms and the Decentering of Lenses," by Ernest E. Maddox, M. D.; "Electricity in the Treatment of Uterine Tumors," by Thos. Keith, M. D., LL. D., and Skene Keith, F. R. C. S.; "Ether Drinking, its Prevalence and Results," by Ernest Hart. All are excellent papers, but not altogether new even to Cis-Atlantic readers, having been read before the British Medical Association, published in British journals, and extensively excerpted by American periodicals.

Notes and News.

E Parvo Multum.*—

The Tragic and Lamentable Fate of an Errant Bacillus Kochi; An Hysterico-Biographical, Laboratorious and Epical Episode done into Poetry of the Present Day.

BY KATISHA KATZENJAMMER.

Of the Bacteriological Institute, etc.

[Translated from the Japanese.]

A little spore in a culture grew,
  Listen to my tale of woe!
Imbedded in a mass of glue,
Till a full-fledged bacillus it sprang into view.
  Listen to my tale of woe!
Now, day by day its ambition grew;
  Listen to my tale of woe!
Like the witch in Macbeth, who made the stew,
It said to itself, "I'll do! I'll do!"
  Listen to my tale of woe!

It saw its chance in a day or two;
  Listen to my tale of woe!
A draught of wind through the laboratory blew,
And out of a window the bacillus flew.
  Listen to my tale of woe!
In a neighboring orchard a little peach grew;
  Listen to my tale of woe!
The little bacillus came there too,
And Johnny Jones with his sister Sue.
  Listen to my tale of woe!

Now, they ate the peach of emerald hue,
  Listen to my tale of woe!
And swallowed the little bacillus too,
Which well in life its mission knew.
  Listen to my tale of woe!
Now, the doctor was called to attend them two,
  Listen to my tale of woe!
Who took from his pocket his microscope true,
And brought the bacillus into view.
  Listen to my tale of woe!

He said, "Here's the cause of this cry and hue."
  Listen to my tale of woe!
For the comma-bacillus well he knew;
And he stained it red and he stained it blue,
In Johnny's corpse was a peach-stone or two.
  Listen to my tale of woe!
In Susie's abdomen a little glue;
"Ah! here is infection and zymosis too,
'Tis sad to say; Boo-hoo! Boo-hoo!"
  Listen to my tale of woe!

Now, all kind friends my advice to you,
  Listen to my tale of woe!
Is when you are walking with a maiden true,
Avoid the peach of emerald hue;
  Listen to my tale of woe!
And if, like Adam, you are tempted too,
  Listen to my tale of woe!
Remember the fate of John and Sue,
Who ate the peach of emerald hue,
And the wicked bacillus that got stained blue.
  Listen to my tale of woe!

CHORUS.

Hard trials for them two,
Johnny Jones and his sister Sue,
And the peach of emerald hue,
Also the comma-bacillus too.
  Listen to my tale of woe!

—*Phila. Med. Register.*

*Chanted at the meeting of the Flint Club, of Baltimore, January 7th, 1891. The President, Dr. George H. Rohé, in the chair.

Don'ts for Doctors.—

The Dixie Doctor quotes Dr. W. H Steele's suggestions to doctors as to what they should avoid.

Don't neglect your business.

Don't misrepresent anything to get business.

Don't try to economize by using cheap material or poor instruments.

Don't make any promises, either financial or professional, that you cannot fulfill.

Don't lock your office during office hours to go off on a frolic, to attend any side show, or for any other purpose that can be avoided.

Don't try to tear down a competitor's reputation on which to build your own; it makes a rotten foundation.

Don't forget that the poor have feeling, as well as the rich, and are just as deserving of respect and your best services.

Don't be cross to the little ones; some day they will be men and women, and they will remember you for good or for bad.

Don't fail to take several good journals, and to keep yourself posted on all new instruments and improvements.

Don't buy a bill of goods because they are cheap or you can get time on them. Do a cash business, and be a cash customer to every one. It will wonderfully enhance your reputation in the community.

Don't repeat some slanderous story that may have been told you by talkative patients while operating for them.

Don't let a "good enough job" go out of your office; do your very best every time for every patient. By this means you will improve your work, improve your patronage, and improve your bank account.

Don't fail to be prompt in collecting and paying your bills, if from any cause you feel obliged to give or receive credit. By so doing you will gain and keep the confidence of all.

Don't abuse tobacco or intoxicating liquors, for intemperance is the rock on which many a good practice has been stranded, and too much indulgence leads to excess.

Don't forget there will come a time when your eyes will grow dim, and your hand lose its cunning. It is when you are young, healthy, and prosperous that you should lay aside something to fall back on in sickness and old age, and when you will be glad to be able to reflect that you are leaving a busy, bustling world better for the part you have played in it.

The Opening of the Johns Hopkins Medical School for Women.—

The much-discussed question of the fitness of women for the duties of the medical profession is again brought up in the Open Letter Department of the Century Magazine for February. Letters from representative men and women reflect the views of the more important component parts of Society, and afford interesting subjects for reading and reflection.

Cardinal Gibbons of Baltimore, Mary Putnam Jacobi, and Prof. Wm. Osler, agree as to the propriety of the action taken by the Johns Hopkins management in opening its medical department to women.

Dr. Osler states that, to Swiss schools of medicine, women are admitted on equal terms with men; even in the dissecting room no difference is made between the sexes. In Paris the same happy state of affairs was noted; at least four or five of the hospitals have now women on the house staff, and, as is well known, these appointments are gained by public competition.

The success of this new departure will be watched with interest. Certainly, Johns Hopkins University, with its facilities and endowment, is in a position to try the experiment.

A Bogus New Jersey Medical College.—

The Health Authorities of New Jersey are investigating a medical college run on the notorious Buchanan's principles.

This institution is entitled the Medical and Surgical College of New Jersey. In a pamphlet issued, according to the Philadelphia Medical News, the head of the concern is proved, over his own signature, to be an offspring of the bogus institution run by "Dr." Buchanan under the style of the Eclectic Medical College of Pennsylvania, and to be an advertising specialist residing in New York City. Connected with the scheme are several men who have doubtful reputations. According to the statement of the Hudson County Medical Society, the so-called college has never had any of the conveniences or requisites which would enable its so-called students to attend either hospital instruction, clinics, or anatomical demonstrations. One of the students stated, however, that there had been two dissections of sheep's heads, and one of a calf's heart. Nevertheless, there have been allowed to "graduate" two classes, one containing twelve persons, and the other three; one of these persons only claimed a residence within the limits of New Jersey.

New York's Public Bath for the Poor.—

A new and attractive bath-house, on the most modern and approved plan, is about to be erected under the auspices of the New York Association for Improving the Condition of the Poor, adapted for use during the entire year, and arranged for both sexes.

The Building Committee is composed of Mr. William Gaston Hamilton, Dr. Gouverneur M. Smith, and Messrs. Roland Redmond, John E. Alexandre, and George Blagden. The structure will be built among the residences of the poor, in the rear of the Broome Street Tabernacle, facing Centre Market. While the bath-house will be free to the most destitute, it is probable that admission fees of either two, three, or five cents will be charged to others, which will include soap and towels, and possibly in winter a cup of hot coffee.—*N. Y. Medical Record.*

The Electric Light as an Anodyne.—

The London correspondent of the Journal of the American Medical Association writes. that the electric light is stated to exercise a most soothing influence over human ailments. According to a medical man, by reflecting the rays of an incandescent lamp upon the sufferer, acute pain is relieved in a few moments. For example, a headache will yield to the treatment in from ten to fifteen seconds, a strong concentration of light on the seat of a malady in any other part of the body will effect a temporary cure in five minutes, and even consumptive patients find their cough quieted and the breathing easier. The light is directed to the affected region through a funnel-shaped apparatus. The treatment is stated to have been tried in Moscow.

Trephining for Headache.—

Prewit; (Weekly Medical Review), reports a case of severe headache, of sixteen years' duration, dating from a blow. The left eye had been sightless for nine years, resulting from an attack of measles. When the operation was performed, the bone was found to be greatly thickened; this being the only lesion discovered. Some sub-arachnoid fluid was evacuated, and the wound closed. The sight returned to the left eye some hours after the operation; a good recovery ensued,and the headache was greatly relieved. Two buttons of bone were removed, on either side of the occipital protuberance, and the intervening bone chiseled away.

Stomach Washing as a Preprandial Practice.—

It is reported that some young *bon-vivants* of Washington, in order to prepare themselves for dining, wash their stomachs. The Medical Record humorously remarks that this practice should be encouraged, and thinks there is no reason why a young man should not wash his stomach as well as his face before going out to dinner. It might even be regarded as an act of courtesy to the host to bring to his table a stomach that has been scientifically laundried, and which lies in neat and antiseptic emptiness folded beneath the diaphragm. Perhaps America, with the curse of dyspepsia upon it, needs more such young men as are produced in Washington.

Diagnosis of the Sex of the Fœtus from the Number of Cardiac Pulsations.—

Dr. Juan Bidart asserts that a certain relation exists between the sex of the fœtus in utero and the rapidity of the action of the heart, by which it is possible to determine almost with certainty whether the infant be male or female. When the pulsations are below 135 to the minute, the child is a boy; and when from 135 to 145 it is a girl. In one hundred cases in which he made observations on this point, he foretold the sex correctly ninety-two times.—*Deutsche Medicinal-Zeitung.*

The Mississippi Valley Medical Association.—

Will hold its seventeenth annual session at St. Louis, Wednesday, Thursday, and Friday, October 14th, 15th, and 16th, 1891. A large attendance, a valuable programme and a good time are expected. The members of the medical profession are respectfully invited to attend.

C. H. Hughes, M. D., President.
500 N. Jefferson Ave., St. Louis.
E. S. McKee, M. D., Secretary,
57 W. Seventh St., Cincinnati.
I. N. Love, M. D., Chair. Com. of Ar.
301 N. Grand Ave., St. Louis.

A Versatile Surgeon.

One of the most versatile medical men of the present day has been Sir Henry Thompson. He attained eminence many years ago in his own profession, specially distinguishing himself in the field of urethral surgery. He was also well known as an artist, having frequently been an exhibitor at the Royal Academy. He was not unknown as a writer and speaker, having on several occasions championed the cause of temperance reform. His novel, published a few years ago, attracted much interest.

The Doctor who Succeeds.

A physician who understands human nature, who plays with the baby, makes friends

vith the children, and listens to the woes of he good wife and mother, is the fellow to vhom the master of the house most cheerfully pays the largest bills. It isn't the medcine that's bottled up, but it's the comfort, he consolation, that are unbottled, that nark the broad line between an unsuccessful ınd a popular physician.—*New York Press.*

A Suggestion to Writers of Medical Papers.—

"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way, and we want downright facts at present more than anything else."—*Ruskin.*

Wanted: Deeds.

Wanted: Deeds.
Not words of winning note;
Not thoughts from life remote;
Not fond religious airs;
Not sweetly languid prayers;
Not love of scent and creeds.
Wanted: Deeds.

—*Trained Nurse.*

Ætiology of Delirium Tremens.

Doctor: You need feel no unnecessary alarm, for he is now out of danger, although suffering acutely from enlargement of the cerebral glands.

Mrs. Tremens: But how do you imagine, Doctor, the attack was brought on?

Doctor: On a little silver tray, probably.

The Columbian Fair and Medical Work.—

The Standing Committee on Medical and Surgical Congresses of the Chicago World's Fair is as follows: Dr. N. S. Davis, Dr. H. A. Johnson, Dr. H. M. Lyman, Dr. J. S. Mitchell, Dr. R. Ludlam, Dr. R. N. Foster, Professor Oldberg, and; Benjamin Butterworth, Secretary.

The Duty on "Tuberculin."

It is decided that 25 per cent. duty *ad valorem* shall be collected on "tuberculin."

Therapeutic Brevities.

Chlorosis and Its Treatment.—Dr. Frederick Scholz of Bremen has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as indeed was observed by Bamberger, Rokitansky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "*plethora ad vasa*," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further, and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and, if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practiced by Dr. Scholz is justifiable.—*Boston Med. and Surg. Journal.*

New Uses for Aristol.—The desirable antiseptic properties of aristol commended it to the attention of dentists. The writer some months ago advised a student in one of the Philadelphia dental colleges to test its virtues in the treatment of ulcerations and for the disinfection of cavities. The observations thus far conducted have been eminently satisfactory, aristol having shown a powerful influence in controlling and arresting pus-formation.

The writer has recently been using aristol

with the lighter petroleum products, in the proportion of ten grains to the ounce, for the treatment of naso-pharyngeal catarrh, and finds it an excellent method of producing re-establishment of the healthy secretions. After the use of Marchand's atomizer with a weak solution of peroxide of hydrogen, the aristol, prepared with blancolin, albolene, or terrallin, may be used in the same manner (sprayed), by which process the affected tissues are protected by an antiseptic oily substance. The method commends itself owing to the harmlessness of the aristol in the proportions indicated, and the satisfaction of the patient in having something which he can use to advantage himself.—*Med. Summary.*

Pichi in Urinary Disorders.—Dr. Reginald Harrison devotes a part of a clinical lecture to a consideration of the uses of certain drugs in urinary disorders. He states:

"The power of quinine in connection with operations on the urinary organs, has long been recognized, and there can be little doubt that this is directly associated with the fact, that it is so largely eliminated by the urine."

He has used pichi during four years in the form of a fluid extract, in drachm doses, with considerable benefit. In renal colic and the passing of calculi through the kidneys and along the ureters, attended with hæmaturia; though not exercising any solvent power, it seems by its action on the tissues in some way to favor the escape of the stone, and thus suppress bleeding; it has been found useful also in the hæmorrhage which frequently accompanies cancer of the bladder. The sedative action of the drug on the mucous membrane of the bladder has proved beneficial in many instances of irritability connected with a large prostate. After the bladder has been properly cleansed by irrigation, and disinfected, it has been frequently found that the calls to urinate were far less urgent when the pichi was being used.—*Boston Med. and Surg. Jnl.*

Warm Baths vs. Opiates.—Dr. Boardman Reed, of Atlantic City, writing of his experience in the treatment of infants seriously ill with diarrhœal complaints, tells of the very satisfactory results obtained by the use of a tepid bath as a sedative. He says: "Every practitioner knows the danger of opiates, when pushed in the case of young children, and especially the risks involved in intrusting such medicines to inexperienced nurses. I am now fully convinced that the tepid bath is the most efficient sedative, and that it is probably, at least, as sure as any of our ordinary anodyne remedies in the control of abdominal pain in young children, after the bowels have been thoroughly relieved of offending causes, such as partially digested food." The tepid bath he recommends is at a temperature of ninety degrees Fahrenheit, during ten or fifteen minutes, to be resorted to whenever the child is threatened with a colicky spell.—*Dixie Doctor.*

Calmative Mixture for Hysteria.—According to L'Union Médical, Grasset employs the following prescription in hysteria:

℞ Chloral, Bromide of sodium, ää 1 drachm.
Extract of belladonna, ½ grain.
Extract of cannabis Indica, ¼ grain.
Syrup of acacia, 2 ounces.
M

Of this mixture, from one to four teaspoonsful may be given. If one teaspoonful is given, it may be repeated every half-hour, or hour, until eight doses have been taken.

The dose may be placed in a tumblerful of infusion of orange-flowers. If pain is associated with hysterical insomnia, analgesin may be given, and it is well to administer arsenic, if the mixture, just mentioned, containing bromine, is used for any length of time.

Action of Bromide and Iodide Potash upon Digestive Processes.—Sansom and Battistini (Deutsche Med. Zeit.) have recently investigated their action with the following result:

1. A solution of either, of the strength of one-half to two per cent., if given fasting, increases the secretion of the gastric mucous glands and diminishes the hydrochloric acid, the iodide having the more marked action.

2. They have no effect on the muscular movements of the stomach, nor upon the processes of digestion induced by a trial meal. They hinder but do not stop the artificial digestion of albumen. Here again the iodide has the more marked action. The bad effects of the continuous use of iodide of potash can be obviated by giving from 15 to 20 grammes of sodæ bi-carb. daily.

Orexin, the Appetizer.—Authorities differ as to the utility of this agent. Professor Penzoldt, who originally introduced it, has taken some trouble to account for its failures, and has to confess that the source of failure appears to be due to the method of administra-

tion which he originally recommended, viz., in gelatin coated pills. He agrees with Dr. Reichenberg in thinking that the orexin hydrochloride in some way acts upon the gelatin capsule or coating so as to render it insoluble in the stomach. In accordance with these views, he now advises its employment in starch-paper wafers. The remedy seems to have given satisfactory results in the hands of Dr. Glückzegle and others.

Convallaria as a Heart Tonic. — Convallaria is of utility in the irregularity of the heart dependent upon acute pneumonia, bronchitis, or emphysema, and is ineffective in fatty degeneration of the heart:

℞ Extr. convallariæ flor. fld., f ʒ ij.
Syrup. aurantii, q. s. ad f ℥ ij.

M. Sig.—A teaspoonful to a tablespoonful three times a day.

Useful in mitral insufficiency and functional heart disease:

℞ Potassii bitartratis, f ℥ ss.
Extr. convallariæ flor. fld., f ℥ iss.
Syr. simplicis, q. s. ad f ℥ iv.

Valuable in general dropsy from heart or kidney disease.—*Med. Bull.*

Mouth-wash for Stomatitis.—The following mixture is a good tonic and antiseptic mouth-wash:

℞ Thymol, 7 grains.
Borax, 15 grains.
Water, 1½ ounces.

A few drops of this to be placed in a wineglassful of warm water, and the mouth rinsed with it. In cases in which the breath is fœtid, owing to deposits about the tonsils and gums, the following wash is said to be serviceable:

℞ Borate of soda, 15 grains.
Alcohol, ½ drachm.
Water, 1 pint.
Thymol, 7 grains.

—*Medical News.*

Resorcin in Septic Poisoning.—Andeer has repeatedly called attention to the value of resorcin in cases of septic infection from post-mortem examinations. In not a single case has he failed to get great benefit from its use. In the case last reported there was already superficial and deep lymphangitis, great swelling, pain, and discoloration of the arm, and swelling of the axillary glands. A large number of antiseptics had been tried without effect, but with the application of resorcin pain disapeared in a few hours, and the patient made a rapid recovery.—*Boston Med. and Surg. Jour.*

Ointment for Hæmorrhoids.—Audhoui recommends in L'Union Médicale, the following ointment for hæmorrhoids:

℞ Ext. belladonna,
Ext. thebaia, ää 15 grains.
Analgesin, 45 grains.
Mercury ointment, 2½ drachms.
Simple cerate, 1 ounce.

This is to be made into an ointment and applied to the inflamed hæmorrhoids. Rectal injections of warm water are to be employed, if constipation is present.

Amyl Hydrate.—The dose of this liquid is about a drachm, but it is not very soluble in water. A small teaspoonful may be given in a glass of beer, or the following may be used:

℞ Amyl hydrate, ʒ ij.
Aq. destill.,
Aq. flor., aurant., ää ℥ ij.
Syr. cort. aurant., ℥ j.

M. Sig. One-half at night.

—*Correspondenzblatt f. Schweizer Aerzte.*

Electricity in General Neurasthenia.—Dr. Joseph Adolphus, of Atlanta, Ga. writes of his experience with electric batteries: "I have used a Kidder battery since 1874. It is a 10 current, and is to-day as good as ever; I have employed it almost continuously. I have used other electric batteries but find this decidedly the best. I find the currents secured by this battery real nerve soothers and tonics, of much value in the treatment of nervous women and general neurasthenia."

Application for Blackheads and Pimples.—

Take of:

Oxide of zinc,
Resorcin,
Starch, } ää 1 drachm.
Vaselin, 2½ drachms.

Mix. Apply a thin coating to the affected parts, letting it remain 12 hours, and rub off with oil. It is best applied at bedtime.

—*Ind. Pharm.*

Trinitrin in Epilepsy.—In the Physician and Surgeon, Dr. R. R. Lansing, of Detroit, reports several cases of epilepsy, where he

used trinitrin, grain $\frac{1}{100}$, subcutaneously with good effect. In the first case, the attack occurring during peritonitis, grain $\frac{1}{100}$ of trinitrin relieved the patient immediately. The next day the same good result was obtained. He reports 6 cases, all females, and in each case the convulsion was immediately controlled.

Treatment of Furuncle.—L'Union Médicale recommends for the treatment of furuncles, washing the region which is affected, with a 1-to-40 solution of carbolic acid, or, what is equally effective, with a 1-to-500 solution of bichloride of mercury. After this is done, carbolized oil may be placed over the part, and, finally, a powder composed of equal parts of iodoform and oxide of zinc. This treatment frequently causes re-solution preventing maturation of the boil.

Seminal Emissions.—As a direct means of diminishing the frequency of nocturnal emissions, Bumstead recommends:

℞ Potassii bromidi, ʒ j.
Tr. ferri chloridi, ʒ j.
Aquæ puræ, ʒ iij.

M. Sig.—One or two teaspoonsful in water an hour after meals and at bedtime.

—*Canada Lancet.*

Malic Acid Lozenges as an Anti-Catarrhal Remedy.—Malic acid lozenges have recently found considerable favor in England as a remedy for sore throat and bronchial cough. They are reported as efficient not only in excessive secretion of mucous and cough, but also in catarrhal conditions of the bowels and in hæmorrhoids.

For Sciatica.—

℞ Tinct. colchici,
Tinct. cimicifugæ,
Tinct. aconiti,
Tinct. belladonnæ, ää ♏ ¾.

M. Sig. One dose.

—Starr on *Nervous Diseases.*

A Sedative in Parturition.—Dioviburnia, a formula which combines the virtues of viburnum prunifolium, viburnum opulus, and other uterine sedatives, is claimed to control hæmorrhage and relieve after-pains in parturition. It may be sometimes combined with advantage, with ergot.

Medical Progress.

Dr. Apostoli's Latest Conclusions on the Constant Galvanic Current in Gynæcology.—The following summary of Dr. Apostoli's conclusions in regard to the subject of which he is at present the greatest authority, will be of interest to our readers:

1. The constant Galvanic current, he says, is indicated in gynæcology principally in endometritis and in fibroid tumors. It is very effective in abnormal conditions of uterine circulation (amenorrhœa and menorrhagia), as well as in painful menstruation; is a powerful aid in arresting the development of simple neoplasms, and in facilitating the absorption of peri-uterine exudations. It exercises a salutary action towards resolution in many peri-uterine phlegmasiæ, and in certain forms of catarrhal ovario-salpingitis; but it is powerless in suppurative inflammations of the appendages—nay, even, it is injurious in strong doses, particularly if the intra-uterine pole be negative. The variable intolerance of the current, which increases with the degree of the inflammatory action of the appendages, serves as a valuable means of diagnosis in determining the existence and the nature of undetected or only suspected peri-uterine fluid connections, hæmic or suppurative, and in deciding the necessity for surgical interference or not.

2. The effects of the constant Galvanic current are polar and interpolar. The interpolar action is trophic and dynamic, which increases as the square of the intensity of the current used, and is superadded to the polar action. The polar action is used for a different purpose according to the pole employed, as first shown by Apostoli himself. A calorific action is developed by the passage of the current which augments the interstitial circulation. And lastly, the antiseptic action of the positive pole has been recently demonstrated by Apostoli and Laguerrière.

3. Strong Galvanic applications exceeding 50 milli-amperes, employed in a variable manner according to the tolerance of the patient and the special clinical indications, form the basis of Apostoli's method, and find their justification in the circulatory depletion, "*drainage circulatoire*," a direct consequence of the calorific action due to the resistance offered to the passage of the current, and proportionate to the square of the intensity; in the antiseptic or germicidal action, which increases with the intensity of the current used; in the rapidity and efficacy of the effects produced, which are proportionate to the square of the electric energy, according

to a formula analogous to that of the measure of energy in other natural forces: $Q = \frac{1}{2} m V^2$; in the easier generalization of the method as applied to obstinate cases, as hard fibroids of the sub-peritoneal variety or fungous endometritis, and to conditions in young subjects; and in lessening the frequency of relapses, which, all other things being equal, are less to be feared the stronger has been the current employed.

4. If the vaginal application of the Galvanic current (which is the method introduced by M. Chéron for fibroids only, and applied since by A. Martin, Brachet, Ménière, Onimus, Carpenter, Mundé, and others) produces certain results, these are very inferior to those obtained by intra-uterine applications, which must remain the method of selection, because it utilizes at once the maximum of the current expended and of its energy, and at the same time the antiseptic action of the positive pole, which is entirely local, and which disappears in the interpolar circuit and at the level of the negative pole. It also utilizes the derivative and caustic action of the intra-uterine application, thus treating at the same time either a simple endometritis, or, as is often the case, one complicating a fibroid or a peri-uterine inflammation, and ensuring thereby a more rapid, more complete, and more permanent cure. It also enables us better than vaginal applications to palliate pain, and to render the use of strong doses more tolerable.

5. The vaginal Galvano-punctures to the depth of from two to five millimetres, by means of a filiform trocar made of gold, insulated in all its extent except at the point, form the complement of intra-uterine electro-therapeutics introduced by Apostoli as a more accurate means of localizing Galvanic action, and of increasing the efficiency, in certain cases, of the application of small or medium doses.

6. The innocuous character of his intra-uterine electro-therapeutics, is demonstrated by comparing it with those of the chemical and operative intra-uterine methods of treatment, and particularly by comparative statistics. Dr. Apostoli made from July, 1882, to July, 1890, 11,490 Galvanic applications, as follows: 8,177 positive intra-uterine Galvano-caustic, 2,486 negative intra-uterine Galvano-caustic, 222 positive vaginal Galvano-punctures, 614 negative vaginal Galvano-punctures. He has treated 912 patients, comprising 531 fibroids, 133 cases of simple endometritis, and 248 of endometritis complicated with peri-uterine inflammation.

Of these 313 fibroids, 70 cases of simple endometritis, 163 of endometritis complicated with peri-uterine inflammation occurred in the *clinique*, and 218 fibroids, 63 cases of simple endometritis, and 85 complicated with peri-uterine inflammation occurred in private practice. He has had three deaths attributable to operative defects. Two Galvano-puncture, of which one was for a sub-peritoneal fibroid, the other for an ovario-salpingitis; and one Galvano-caustic application for a cyst of the ovary, mistaken for a fibroid.

He has observed 30 cases of pregnancy which occurred after intra-uterine Galvanic applications.—*Lancet* (London.)

Antiseptics as Remedial Agents, Shall They Go?—That surgery in its wonderful relief of suffering humanity should rank next to godliness seems eminently proper; but the necessity of wresting from the soap men the old saying—"Cleanliness is next to godliness—to prove this exalted position is hardly apparent. To stake the security of our present surgical treatment, made possible by antiseptic methods, upon cleanliness pure and simple, appears like throwing away our insurance papers and relying upon relentless vigilance to intercept the incendiary bacillus. The inhibitory power of the absence of dirt may well be questioned, and satisfactory results attributed to good luck, perhaps, as often as to good management.

We are led to these reflections by a perceptible tendency toward abandoning antiseptics for simple aseptic methods, using merely sterilized dressings for those charged with trustworthy antiseptics or germicides.

Is there more reason for yielding to nature the field of antiseptic surgery than the domain of medicine? Has nature furnished us with valuable antiseptics only to have them thrown back at her and asked to do all the work herself? Is the average practitioner ready to take a Turkish bath between patients?

Antiseptics we consider as auxiliaries to cleanliness, not as substitutes. The question is not as to the importance, but the practicability of cleanlines in the strictly aseptic sense. Even if practicable, wherein is the safeguard against the access of germs from a questionable environment?

Have not antiseptics a remedial value apart from their inhibitory or germicidal power? And ought not the list of antiseptics to be extended so as to afford desirable applications for any wound surface or surgical lesion? Our own conviction is that antiseptic surgery should be perfected rather than abandoned.

The fact that some surgeons succeed with-

out antiseptics, as some unquestionably do, is no guaranty that anything like a general abandonment of them would not mean a long step backward toward the fearful mortality which disgraced surgery before Lister's introduction of antiseptic methods. We, in common with all surgeons, advocate the most perfect condition of cleanliness practicable, but we cannot consider it as at all safely inhibitory to germ development.

Recognizing the antiseptic influence inherent in living animal tissues and the germ-intercepting power possessed by the fibre of unmedicated dressings, we think the margin of security in the absence of trustworthy antiseptics extremely narrow.

Commercial surgical dressings simply sterilized cannot be trusted by the surgeon, unless received by him in an air-tight container known to have been sterilized within, and any dressing remaining after the first opening of the package must be re-sterilized before use.

It is of the utmost importance that surgeons, contemplating any change from their present antiseptic methods, secure their sterized dressings in germ-proof containers. And, before making any such change, we suggest that they ponder well the question: Why not select for use, in each particular case, dressings charged with a trustworthy antiseptic peculiarly adapted to the diseased condition as a remedial agent?—*International Journal of Surgery*, January, 1891.

The Progress of Surgery in 1890.—There has been noticed in the year gone by that reaction which was bound to follow the enthusiastic prevalence of intra-abdominal operations during the last few years. The matchless skill of the leaders in these procedures has taught us a technique that can scarcely be improved upon; while the number of operations performed has become less, through more perfect discrimination in the selection of cases absolutely requiring such measures. In the matter of operations for the relief of disorders due to inflammatory conditions of the vermiform appendix, the main points developed have been chiefly in the line of improved diagnosis, and in a general belief in the advisability of early interference.

The study of intestinal anastomosis first evolved by Senn has been taken up by a host of men, though, strange to say, its practical applications are still limited too much to our own country. The monograph written by Prof. Senn upon "Diagnosis and Operative Treatment of Gunshot Wounds of the Stomach and Intestines," bids fair to become one of the classics of surgery for years to come. No better illustration of the progress made in this domain of surgery can be given than the brilliant results obtained by Prof. Bernays in a series of seven cases of gunshot wounds of the abdomen, which formerly would have been regarded as hopeless and left to die without surgical interference.

The methods of skin grafting and transplantation devised by Thiersch have proved their value in many hands during the past year, and now are fully admitted among the established surgical procedures of common occurrence.

Mr. Horsley's experiments in the transplantation of the thyroid gland of animals to the human subject have been followed by a practical application of the procedure, and bid fair to add one more to the many splendid results attained by this indefatigable experimenter.

In the surgery of the joints a more conservative tendency is becoming manifest; and in Germany, especially, the injection of iodoform emulsions in tuberculous joints has been employed with much success as a substitute for more radical procedures.

Among the improvements brought about in the technique of special operative procedures, the bloodless method of amputation at the hip joint, devised by Prof. Wyeth, of New York, and performed with success by himself and others, takes high rank.

Operations upon the nerve-centers and the nerves themselves have greatly multiplied, and operations of unheard-of magnitude have this year been reported, by which the brain and cord have become a far wider operative field than had ever been previously thought possible.

The discovery with which Koch startled the medical world a few months since has not been sufficiently developed to permit of positive deductions regarding its value in the various forms of surgical tuberculosis.—*International Journal of Surgery.*

Treatment of Vaginitis.*—In the treatment of vaginitis, many cases are relieved by no other measure than strict attention to cleanliness, as in this patient, for whom the treatment has been simple washing out of the vagina with hot water, or hot water containing boric acid, which has here led to the subsidence of all the symptoms. Inflammation may be kept up by the want of removal of the exudations; frequent irrigating re-

* Dr. E. E. Montgomery, in Philadelphia Medical and Surgical Reporter.

moves this material. In more severe inflammation of the mucous membrane, irrigation with astringent remedies is very beneficial. Avoid syringes which force the water with violence into the vagina. Use in preference a fountain syringe, placed about three feet above the patient, and allowed to be used while she is in a sitting or semi-sitting position, to permit a free return of the fluid, whereby balooning of the vagina is prevented. Inject several times, two quarts of water at one sitting. Keep the nozzle of the syringe below the uterus, and move it about, this precludes the entrance of water into the uterus, which might give rise to violent attacks of uterine colic and increase the danger of septic material being washed into it. One of the most effective preparations for injection is a sublimate solution, in the strength of 1, 2, 3, or 4 to 1,000; which may be followed by some astringent, such as sulphate of zinc—40 to 60 grains to the quart. Acetate of lead, gallic acid, tannic acid, or extract of hydrastis (which is another form of tannic acid), may be used. If the removal or sterilizing of the discharge is incomplete, it is important to supplement this treatment by placing the patient in a Sims' position, and go over the mucous membrane with a mop, containing some such agent as nitrate of silver, in a two-per-cent. solution. By the use of a Sims' speculum, it is possible to reach the summit of the posterior and anterior fornices of the vagina, and the posterior surface may be reached as the instrument is withdrawn. In very many cases, the application of the remedy with a spray is a very effective method, as the evenly-divided material is driven into the cracks and crevices not touched by the mop.

Where extensive ulceration exists, still further treatment is essential. The vagina must be tamponed to keep the surfaces apart. Gauze is the best agent for this, and that made with iodoform is the least irritating. This can be picked up lightly, or the whole vagina may be plugged. The gauze can be placed in dry, or wet with some antiseptic solution.

In follicular vaginitis this treatment does not suffice. In such cases we find the true layer of epithelium gone, and in its place a growth of papillæ. It is necessary to destroy these papillæ. Generally the best agent for this purpose is the thermo-cautery.

There is a form of granular vaginitis which is apt to occur in women of intemperate habits, especially if they have passed the climacteric. It is in reality a senile vaginitis, and is likely to proceed as long as indiscretions in diet and drinking are kept up.

Vaginitis is likely to appear in plethoric subjects with a gouty diathesis. In the latter case all blood conditions must be improved. In all cases, remember that there is danger of extension if the case is not properly treated. In displacement of the uterus its cavity may be dilated. Its contents are not freely drained, and may be discharged at intervals, giving rise to the impression on the patient that she has had an abscess discharge. This material is exceedingly irritating, and invariably gives rise to inflammation of the vagina.

From what I have said of the cause and treatment of vaginitis, you will readily perceive the importance, in every case, of examining carefully as to the conditions which may have originated it, and directing your treatment to correction of the conditions by which it has been caused. This demonstrates that you cannot divorce the special from the general practitioner without disadvantage to the doctor and patient.

TERPIN IODIDE IN ACUTE DISEASES OF THE LUNGS.—For the past two or three years I have carried on a series of therapeutical investigations in search of some antiseptic agent that would act as a specific against the development of acute diseases of the lungs, more particularly acute congestion, pneumonia, and those catarrhal and throat affections which are so often the premonitory symptoms of more serious mischief.

While I have demonstrated to my own satisfaction that these diseases may be cut short, I am not so sanguine that the remedy will prove curative in all cases where a disease is once fully developed, yet further investigation may prove that it possesses specific properties even in these cases.

It has been my desire only to suggest some drug or combination of drugs which will prevent the ravages of the various cocci that are carried into the lungs through the agency of those septic storms which are so frequent in this climate, before an actual disease of the lungs has been established.

The great disadvantage the physician has to contend against in the administration of medicines, is the changes they are liable to undergo when taken into the stomach before they finally enter the circulation. It would therefore appear that we ought to administer all our remedies hypodermically, and perhaps this is the more rational way of obtaining their full benefit. But this mode has its objections. In the first place, it requires more or less skill; besides, it is painful, and at times is followed by unpleasant effects.

I believe that terpen iodide enters into the circulation unchanged, from the fact that it acts as quickly as if it were administered hypodermically. It is my judgment that the remedy offers greater succees and produces happier results than any other of this class of remedies. While it is a powerful antiseptic, it is comparatively harmless, for, after prescribing it for several years, I have yet to meet with any unpleasant effect.

In acute affections of the throat it may be used in spray, while in other cases it may be given to adults in ten-drop doses, on a teaspoonful of sugar, once or twice a day—in the morning and at bedtime. The morning dose should be followed by a glass of milk or bouillon. Larger or more frequent doses are apt to excite too great a discharge of urine.

I have no doubt that terpin iodide will, should it come into general practice, find a wider range of usefulness than that above indicated. As to its value in phthisis, pulmonalis, diphtheria, and other zymotic diseases, I am at present unable to speak.—Wm. H. Gregg, M. D., in *N. Y. Med. Jour.*

McDowell's Method of Controlling Nasal Hæmorrhage.—I have read with considerable interest the article from Dr. W. W. Parker on "A Simple Substitute for Bellocq's Cannula and all other Methods for Controlling Epistaxis." I see that his method has been published in several medical journals, and, as no one has suggested anything better, I ask for space to give the plan that Prof. John T. Hodgen of St. Louis taught twenty years ago. He called it Dr. John McDowell's method.

It is, to introduce a condom into the nasal cavity, and fill it with air or water.

For fear some one may have the same difficulty that I had on attempting this method—that is, have the bag fill on the outside of the nose, and pull out what had been pushed into the nasal cavity—I will give the method I have practiced.

Cut off two or three inches of the open end of the condom, as may be thought necessary, and introduce a No. 5 or 6 soft rubber catheter, leaving the bag to project about half an inch beyond the end of the catheter, as it will shorten when distended. Hold the cut end of the bag evenly around the catheter, and take a few turns with sewing thread, and tie securely to prevent leaking, but not so tight as to obstruct the lumen of the catheter.

Now dip this simple instrument a few times in clean water, hold the bag between the thumb and finger of one hand, and twis the catheter with the other until it is brough in contact with the end of the bag.

While holding the instrument in this way ask your patient to forcibly blow the nose s as to free it from all blood-clots. Now intro duce the instrument into the bleeding nostr until it lies just within the cavity. Then giv the catheter a turn in the opposite direction and fill it with air or water, and plug the en so the rubber bag will remain distended The catheter can then be fastened to th head with a bandage, or a cord may be tie tightly around it near the nose, and cut off.

It seems to me that this is the simples and safest method of plugging the nasal cav ity. And it is so easy to remove it—all you have to do is to let the air or water out twist slightly, and withdraw the bag. When properly done, it is the most cleanly, and least objectionable, of any method I have seen described.

It might be well in some cases, to use two condoms in making this apparatus, slipping one bag into another, to prevent, after operations, sharp spiculæ of bone from cutting through and spoiling the bag.

If any physician fears his moral integrity might be called in question by carrying about with him Dr. Condom's invention, he can cut off an inch or two from the open end of the long bag, and have left all he needs to plug the nose with.—Dr. H. D. Wood in *Medical Record.*

Massage in the Treatment of Constipation in Infants.—Conformably to the peculiar anatomy of the abdominal organs of infants, it is necessary to modify to some extent the rules governing the practice of massage of the abdomen in adults. Since the most frequent cause of constipation in young children is a torpidity of the lower part of the large intestine, the author advises that manipulation be confined principally to the left flank and lateral region of the abdomen. The hand should be anointed with vaselin to enable the operator to keep a firm hold of the skin. Dry massage irritates the delicate skin of a baby, and may frequently produce eczema. During the operation, the child should be allowed to nurse, in order to prevent it crying and thus starting contraction of the abdominal muscles. The duration of the *séance* should be four to five minutes. The author has obtained very favorable results in both chronic and recent cases, which have yielded readily to massage without the use of any purgatives—*Annals of Gynæcology and Pædiatry.*

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Original Articles.

THE LYMPHATIC SYSTEM.*

BY J. S. FOOTE, M. D.

The lymphatic glands observed by Hippocrates, the thoracic duct discovered by Eustachius in 1564, the lacteals discovered by Asellius in 1622, the venæ aquosæ hepatici studied by Pecquet of France, in 1650, the lymphatic vessels demonstrated by Bartholin of Denmark, Jolyff of England, and Rudbeck of Sweden, at about the same time —all dormant during the one hundred years which followed, then revived by the Hunters, Hewson, and Cruikshank, of England, the Monroes of Scotland, and Mascagni of Italy; animated by the decades which ensued until evolved, pictured and described by the crowning glory of Sappey, Klein, Key, and Retzius, Robin, His, Virchow, Recklinghausen, Ludwig, Leopold, Balfour, and others—collectively embodying the lymphatic system, have come down to us through the hidden byways of the animal creation, revealing in historic career the grand achievements of the master minds of a great profession.

But what is the lymphatic system; where is it; what does it do?—These questions arose in the beginning, and are in the ascendency now, awaiting the answers of generations as they come and go; and these, if correct in their import, will at no distant day lift the veil which has hung so long, and so heavily, between the eyes of the earnest student of medicine and the mysterious works of so many pathological conditions.

The lymphatic system is made up of four different things; spaces, vessels, lymph and lymphatic glands, lymph nodes or lymphoid tissue. It is usually described as arising in four ways, viz: By the lymph spaces, serous membranes, peri-vascular spaces, and lacteals; but as all of these origins are in reality spaces, the system is practically and pre-eminently a system of spaces. The spaces communicate with a series of vessels; the vessels are occupied by lymph, interrupted in their course by the lymphatic glands or lymph nodes, and proceed only in one direction—from the periphery toward the heart. It is then a semi-system, the current of whose vessels flows centripetally.

The four parts of the system may be described as follows: Between the cell elements of the tissues—except, perhaps, the epithelia of the hair and nails where the cells have been transformed by a deposit of eleidin or kerato-hyalin, into a condition of permanency without the vital dependence upon the nutritive fluids which active cells require—are found minute spaces, slits, or clefts, irregular or stellate in shape, in the connective tissues, and canalicular in shape between the epithelia. These spaces, usually without an endothelial lining, communicate with each other by means of tubular processes and unite to form the lymphatic capillaries. The capillary is composed of a single layer of endothelium the cells of which are united by a small amount of cement substance, and have irregular sinuous outlines. After passing out from a commencing plexus the capillaries soon take on a very light coat of elastic tissue, then a coat of unstriped, involuntary muscle running circularly, and lastly, a coat of white, fibrous tissue with elastic fibres; the three coats corresponding to the coats of the veins. Further, the lymphatic vessels are provided with valves which follow one another at shorter intervals than those of the veins.

Somewhere in the course of the vessels, will be found lymph nodes, or the so-called lymphatic glands.—The vessels break up into two or three afferent branches which enter the sinuses of the nodes and emerge by a number of efferent branches at the

* Read before the Medical Society of the Missouri Valley, December, 1890.

hilum. The lymph nodes, about 700 in number, are composed of a surrounding capsule of connective tissue sending trabeculæ containing smooth muscle fibres into the interior of the node, dividing it into a series of compartments which are more or less spherical in the cortex and cylindrical in the medulla.

These compartments anastomose with each other and contain lymphoid tissue. The masses of lymphoid tissue are smaller than the compartments in which they are situated, and supported by a delicate retiform tissue. This arrangement leaves a sinus or channel interrupted only by processes of the reticular tissue around the lymphoid bodies. The current from the afferent vessels flows through these sinuses or channels, bathes the surface of the lymphoid masses, and takes its exit through the efferent vessels. The lymphatic vessels, after passing through one or more nodes, proceed to enter the venous circulation either by the thoracic duct which, beginning in the receptaculum chyli, situated on the second lumbar vertebra, runs up the back bone to the root of the neck, where it enters the left sub-clavian vein at its junction with the internal jugular; or by the right lymphatic trunk, a vessel half an inch to one inch in length, which enters the right sub-clavian vein at its jugular junction. Around the cavities of the body are expanded planes of connective tissue interspersed with elastic fibres and covered with endothelial cells, between which are stomata; from their membranous appearance, and from the nature of the fluid in the cavities, these expansions are called serous membranes in general, and peritoneum, pleura, pericardium, tunica vaginalis testis, tunica vaginalis oculi, labrynth of the ear, and arachnoid, in particular. The spaces inclosed by these membranes are called enormous lymph spaces, but differ in some respects from the minute spaces mentioned above.

The lymphatic vessels proceed from the stomata of these membranes, through lymph nodes to the thoracic duct and sub-clavian vein. Surrounding the smallest blood vessels of the central nervous system, bone, retina, and liver, are sheaths of larger calibre than those of the vessels. These enveloping sheaths form what is known as the peri-vascular origin of the lymphatic system. As the blood vessels become larger they penetrate the sheaths. In the adventitia of the blood vessels of the brain a system of lymph spaces is also found. Commencing a little below the pylorus of the stomach, extending in abundance through the duodenum, jejunum, and less numerously through the ileum, are about four million little projections of the intestinal mucosa called villi.

A villus of about $\frac{1}{50}$ of an inch in length is covered by a single layer of columnar epithelium, and is composed chiefly of lymphoid tissue containing smooth muscle fibres from the muscularis mucosæ, running lengthwise while in the axes of the projections are located the lacteals, another origin of the lymphatics.

The lacteals, surrounded by leucocytes blood vessels, and smooth muscles, are simply projecting spaces lined by endothelium, if lined at all, uniting the intestinal tract with the circulation. As the great circulatory system contains red blood, so the lymphatic system contains white blood; as the red blood consists of plasma, in which are suspended red and white cells, so the white blood, or lymph, consists of plasma, in which are suspended white cells, or leucocytes alone.

Plasma of the lymph differs from plasma of the blood in the quantity of its solid constituents per 1,000 parts.

Fibrinogen and fibrino-plastin, unite by means of the fibrin ferment set free from disintegrated leucocytes and fibrin, or a clot is formed in both. The lymph clot, however, is less firm than the blood clot. Urea is more abundant in the lymph than in the blood. The chyle, or contents of the lacteals, differs from lymph in the fat globules which it contains, and which give the chyle its white color, in the absence of the coagulating ferment.

Last, but not least, still involved in the obscurity of ages, active in procedure—the confessional of text books, the pivotal point upon which turns physiology and pathology in mixed confusion, a stranger to many, a friend to few,—is that important part of the lymphatic system called lymphoid or adenoid tissue.

Lymphoid tissue is composed of a reticu-

ar framework, in the meshes of which are closely packed leucocytes.

Where is the lymphatic system? This array of incomplete and rudely-constructed pictures which you see before you—intended only to supplement the little I have to say on this question — will answer: "Everywhere."

We find the lymph spaces virtually converting the connective tissue—that great framework of the body—into a network of lymphatics.

We find the lymph spaces in the perimysium of the voluntary muscle; in the epineurium of nerves; in the peri-vascular clefts of the adventitia of blood-vessels; in the fine mesh-work of the neuroglia; between the formative prickle cells of the stratum mucosum of the epidermis; in the connective tissue framework, and papillæ of the corium of the skin; in the epithelial covering, corium and papillæ of the mucous membrane of the mouth; in the adenoid mucosa of the trachea and bronchi (from which minute canals pass through the basement membrane to the intercellular substance of Debove's membrane, between the striped involuntary anastomosing muscular fibres of the heart); in the walls of 725,000,000 air-cells of the lung into which the stomata of the alveoli open; in the mucous membrane of the stomach, where they occur between and around the tubular glands, forming sinus-like spaces; in the lymphoid tissue of 4,000,000 villi of the small intestine, where they form a system of intercommunicating channels between the crypts of Lieberkuhn of the large intestine; in the peri-capillary tubes or sheaths around the intra-lobular vessels of the liver; in the pancreas and secreting glands extending from the lumen of the alveoli, between the secreting cells; in the lymphoid tissue of 7,000 Malpighian bodies of the spleen where they become peri-vascular, in the parenchyma of the kidney, where they form large slits in the interstitial tissue, especially numerous around the convoluted tubuli uriniferi, the slits passing to the surface, where they expand into spaces beneath the capsule; in the connective tissue of the muscular coat of the bladder; in the adenoid tissue of the mucous membrane of the body of the uterus; in the matrix of the ovary; in the mucosa of the vagina; beneath the deeper cells of the mucous membrane of the urethra; in the interstitial tissue of the testicle, where they form enveloping tubes around the basement membrane of the tubuli seminiferi; in the Haversian canals, where they become again peri-vascular; in the lacunæ and canaliculi of the bone, and in the tissues of the cornea and retina—in fact, so universal are they that the tissues of the entire body are practically transformed into an enormous system of spaces, around which are the cell elements.

The lymph nodes are arranged in groups, the vessels converging to them from the surrounding area. In general they are to be found around the base of the skull, in the axilla, bend of the elbow, along the spinal column, along the bronchi between the ribs, along the sternum, along the internal and external iliac arteries, between the layers of the mesentery, in the inguinal region, in the saphenous opening and popliteal space.

The groups are in communication with each other by means of vessels—all lymphatic vessels, sooner or later, pass through a lymph node. The lymphatics from the right side of the head and neck, right shoulder, arm, thorax, lung, heart, and upper surface of the liver, all empty into the right lymphatic trunk, the lymphatics from the rest of the body empty into the thoracic duct. The vessels usually follow the superficial and deep blood-vessels. The body has four surfaces—an outer, covered with stratified pavement epithelium in contact with the atmosphere; a respiratory surface covered with ciliated epithelium in contact with the inspired air; an alimentary surface covered with pavement and columnar epithelium in contact with food; and a genito-urinary surface covered with transitional pavement and columnar epithelia which is subject to contact with things external.

Now, the greater part of the lymphatic system is concerned with these surfaces and their so-called appendages; especially dense is it about the entrances to the body. There is a dense network of lymphatic vessels in the roof and floor of the mouth.

The vessels uniting from the mucous membrane of the cheek, gums and hard palate, form four or five larger vessels, some of which enter the lymph nodes of the par-

otid gland, while others, joining with those from the middle of the forehead, nose, inner canthus of the eye and lips, enter the submaxillary and deep cervical nodes. The lymphatics of the tongue run diagonally from the outer edge towards the raphé as far back as the V-shaped circumvallate papillæ where they are especially dense, then uniting into seven or eight large trunks, where, receiving vessels from the mucosa of the nose, Eustachian tube, tonsil, pharynx, larynx, soft palate and uvula, proceed downward and backward to enter nodes beneath the thyrohyoid ligament, near the bifurcation of the common carotid and on the anterior surface of the atlas.

The epiglottis and uvula are little else but lymphatics in the child. Besides the lymphatic vessels, there is much lymphoid tissue both in the form of circumscribed bodies, as in the tonsils and the follicular glands, and in the form of diffuse masses, as in the mucous membrane of the base of the tongue.

The mouth therefore, as a whole, becomes a part of the lymphatic system. Again, in early life the lymphatics of the mucous membrane of the trachea are exceedingly numerous; they disappear somewhat as the adult age is attained, but in the smaller bronchi remain as a very dense system.

The walls of the air cells of the lung are composed of a network of elastic fibres intermingled with which is a network of branched connective-tissue cells which are contained in similarly shaped spaces, the whole being covered by a layer of large, clear, non-nucleated epithelial cells and a few smaller nucleated cells.

The spaces referred to are lymph spaces and lymphoid cells—leucocytes are found in both air cells and spaces. The spaces communicate on one side with the lymphatic vessels, which ultimately enter the bronchial nodes, and, on the other side, with the cavities of the air cells: So that the entire breathing surface of the lungs becomes a part of the lymphatic system.

The mucous membrane of the stomach is made up of short-necked cardiac, and long-necked pyloric, tubular glands, between and around which are lymphoid tissue and enveloping lymph sinuses. The lymph vessels from these sinuses pass through the nodes on the lesser and greater curvatures of the organ on their way to the thoracic duct. By their arrangement the lymphatic system has something to do with the stomach.

The mucous membrane of the small intestine is composed of myriads of lymphoid villi, projecting into the lumen of the intestine and crypts of Lieberkuhn, and dipping into an adenoid structure; while scattered along the entire length of the organ are many solitary and agminated lymphoid bodies. The vessels from this mucosa pass through the mesenteric nodes. The greater part, therefore, of the mucous membrane of the small intestine is lymphatic.

As we approach the large intestine, the villi disappear, Peyer's patches are not found, the chalice cells of the crypts of Lieberkuhn are increased, the solitary nodes remain, the lymphatic is less extensive, yet present.

In the tail-end of humanity—sometimes called the vermiform appendix—the mucous membrane contains little besides lymphoid tissue and a few rudimentary crypts. This little organ is lymphatic in its joys and its sorrows.

Cemeteries contain many monuments to the achievements of this little body; while the physician went about not quite certain whether he was a great man or not. The lymphatics of the anus are many, and are continuous with the skin—they wind around the thigh, and enter the inguinal nodes, while those of the rectum pass through the sacral and lumbar nodes.

Again, beneath the epithelium, the urethra along its whole length, is a densely-packed cylinder of lymphatics, receiving vessels from the spaces between the deeper cells of the mucous membrane; from the glans penis, where they are in great abundance; from the prostate, vesicular seminales, and ejaculatory ducts; and all together, forming two large trunks, enter the inguinal nodes. The urethral surface is then a lymphatic surface covered with epithelium.

The tissue which connects the tubuli seminiferi of the testicle is made up of layers of areolar tissue. Between the layers are large cleft-like spaces which enclose the basement membrane of the tubules. These spaces communicate with vessels which enter the abdominal cavity and pass through the lumbar nodes.

The uterus is composed of a serous coat—a muscular coat, and a mucous membrane which lies upon the muscular coat with no sub-mucous connecting layer of fibrous tissue. The mucous membrane is composed of a lining of a single layer of ciliated columnar epithelium, which dips down to form the uterine glands, and a mucosa consisting of a network of connective tissue fibres enclosing a vast number of inter-communicating lymph spaces, within and around which are a large number of spheroidal, fusiform, and branched cells, making up a tissue which appears like connective tissue in an incomplete form. Robin considers it embryonic and Charpentier as a lymphatic organ; it seems to be formative in character.

The uterus has three sets of lymphatics—one beneath the serous coat, one in the muscular coat, and one in the mucosa. The lymphatics from the body and fundus join those from the Fallopian tubes and ovaries and pass to the lumbar nodes. Those from the cervix and upper three-fourths of the vagina enter the iliac nodes; while those from the outer one-fourth of the vagina and external genitals enter the inguinal nodes.

Rouget has shown that the activity of the muscular coat of the uterus, during ovulation, contracts and compresses the venous and lymphatic vessels. This condition congests the mucous membrane, causes the lymph spaces to distend, the blood capillaries to rupture, and the cells of the mucosa to proliferate and form a thickened condition of the mucous membrane of the body and fundus, which condition resembles somewhat that of a tumor. The cervix not being similarly constructed does not undergo the same changes.

The pathology of uterine diseases seems to more closely resemble the pathology of tumors and inflammatory conditions of connective and lymphoid tissues, than it does catarrhal inflammations.

What is a placenta but a vascular tumor; or an umbilical cord but a myxoma? The mucosa of the uterus then appears to belong to the lymphatic system.

Again, off by itself, scarcely connected with the rest of the body, always present, sublimely alone, containing a laboratory whose doors are locked, occupying an eminence toward which the scientific eye has been gazing for centuries, ever an object of interest, always an object for contemplation, is the spleen. This organ is enveloped in a capsule of connective tissue which sends trabeculæ, containing smooth muscle fibre into the interior of the organ, along which are the branches of the blood vessels and lymphatics. Scattered here and there, centrally and concentrically around the blood vessels, are the Malpighian bodies of lymphoid tissue. The branches of the splenic artery become terminal, and the blood is poured out into a system of intercellular spaces and is again taken up by the splenic vein. The spleen in part at least seems to be a lymphatic organ.

Handed down from the blissful mystery of fœtal life, unwelcomed, unsummoned by the student of histology and physiology, is the thymus gland. This organ reaches its highest point of development at the age of two or three years, remains stationary until about puberty, then declines and disappears; it consists of a frame work of connective tissue surrounding masses of lymphoid tissue forming another lymphatic organ.

Histologists describe the supra renal capsules as composed of a connective tissue framework containing a zona glomerulosa of spherical masses of epithelial cells, a zona fasciculata of vertical columns of epithelial cells, and a zona reticularis of smaller polyhedral cells. Between the cell columns and connective tissue septa, are lymph spaces. They locate the organs in the lymphatic system and leave the rest, without a blush, to posterity.

Somehow connected with human happiness is the liver. Its lobes are composed of lobules which are separated from each other by the capsule of Glisson, containing the interlobular veins, hepatic artery and duct; while commencing at the center of the lobules are the intralobular veins which make up the hepatic vein. The lymph spaces originate around the capillaries of the lobules and emerge along with the portal vessels and hepatic vein.

Another set (sub-peritoneal) communicate through the ligaments with the lymph nodes of the anterior mediastinum.

Behind the peritoneum—enclosed in a fib-

rous capsule, composed of pyramids of straight tubes separated by the columns of Bertini, a cortex of medulla rays, convoluted tubes, glomeruli, inter-lobular arteries sending vasa afferentia within the capsule of Bowman, from which they emerge as vasa efferentia, which, breaking up into a network of capillaries, surround the convoluted tubes and take their exit by the renal vein; of an interstitial tissue, which consist for the most part of branched cells—is the kidney, an organ the structure of which merits the enthusiasm of every ardent admirer of complexity. Between the tubules in the connective tissue stroma of the organ are the lymph spaces, which are very numerous, and which, by uniting with others, eventually reach the surface, where they expand beneath the capsule; from these expansions vessels are formed which pass to the lumbar nodes.

Bone is made up of Haversian systems. Each system is made up of concentric lamellæ of bone tissue, between which are rings of lacunæ containing osteoblasts. The lacunæ communicate with each other and with a Haversian canal at the center of the system by means of the canaliculi which contain the protoplasmic processes of the osteoblasts. These canaliculi and lacunæ are the lymphatic spaces by means of which the nutritive parts of the blood reach the cells.

From this bird's-eye view of the lymphatic system, we see that it is vast in extent and peculiar in arrangement. Its lymph spaces seem to occupy a close relation to the elemental structures of the body. The fine canalicular extensions of these spaces reach a point between individual cells, which could not be approached by the capillary system.

Remembering, therefore, its extent and arrangement, let us proceed to the next question: "What does it do?" In text books, the lymphatic system is placed under the head of absorption, as though this were its most important, if not only, function.

This is a good way to dispose of it perhaps, but a closer investigation will, I believe, accomplish much in the future.

The body is made up of five tissues; these are composed of cells and an inter-cellular substance. How do these cells live? From the plasma of the blood. How does the plasma reach them? By means of the lymph spaces, which we have seen are everywhere.

The arrangement is something like that of a city water-works. The supply-pipes enter the houses and faucets are placed in different rooms over a bowl or sink. Under each faucet there is a goblet. Leading away from bowl or sink are the sewer-pipes. Now, the supply-pipes are the arterial capillaries; the goblets under the faucets are the lymph spaces; the people of the house who drink from the goblets are the cells of the body, which drink from the lymph spaces; the sewer-pipes are the veins and lymphatic vessels.

The prime object of the sewer-pipe is to remove waste materials; but the prime object of the goblet is to supply the people with a convenient means of obtaining water.

So, while the prime object of the lymphatic vessels is to remove waste products, the object of the lymph spaces is to provide suitable reservoirs from which the nutritive fluids may be obtained.

Supposing there were no lymph spaces and the plasma of the blood continued to transude through the walls of the capillaries, where would it go and what would become of it? It is not reasonable to conclude that the plasma would or could soak into the bodies of cells. Living cells do not admit of this procedure. They take nutriment as they require it. There is certainly a connection between the blood capillaries and the tissue cells, and the spaces constitute that connection. It is fair to conclude that wherever there are cells there are spaces; otherwise how could the cells be nourished? The location and extent of these spaces would, therefore, indicate that they are nutritive spaces.

Again, if the lymphatic system is chiefly a nutritive system, we might expect it to reach its highest development during the growth and development of the body; and this seems to be true.

The lymphatic system is very abundant in early life, and gradually declines as age advances. At birth, portions of the mucous membranes are very densely supplied with vessels, and youth is the period of lymphoid tissue.

The formative or the constructive periods,

re the lymphatic and lymphoid periods. he thymus gland disappears at puberty; nd there is a general tendency, on the part f lymphoid tissue, to atrophy after 40 or 45 ears of age. At this time, also, the prolifer- ting tendency on the part of connective tis- ue is diminished, and the transformation of he connective tissue cell bodies into fat is ommon. The appearance of fat at this time s an indication that the constructive period s over.

Again, if the lymphatic system is a nutri- ive system, those parts of the body which are most actively engaged ought to be boun- tifully supplied with lymphatics; and this seems to be the case. The skin, in which the cells of the stratum mucosum are con- stantly proliferating to supply the loss to the stratum corneum from friction and surface changes, is placed between two expanded sheets of lymph spaces and vessels.

The mucosa of the mucous membranes of the respiratory, alimentary and genital tracts, which are always in a state of activity, is bounded above by lymph spaces or sinuses, and below by vessels, being composed itself of a stroma in which lymphoid tissue figures extensively. The mammary gland in the virgin contains few lymphatics capable of demonstration, while in the condition of pregnancy the lymphatics are enormously developed.

Again, in those parts of the body which are beyond the reach of the blood circula- tion, the only way in which the cells of these parts can be nourished is by means of the lymph spaces and channels. One of the great objects, then, of the minute lymph spaces, appears to be for the purpose of nutrition.

Now, although the serous cavities of the body are called enormous lymph spaces, it would seem, from comparison, that they do not resemble their microscopic companions in all respects.

The pleural cavity, for example, is not a nutritive cavity, nor essentially a drainage cavity; the pleura simply enables the lung to glide over the chest wall with the least possible friction, and also by allowing the lungs this gliding motion, establishes an air pressure at the apex and bottom of the lung. The serum bathes the two rubbing surfaces and enters and leaves the pleural cavity by expiratory and inspiratory processes.

There seems to be another important dif- ference between the two. The lymph spaces usually contain leucocytes: These cells may be derived from similar cells in the blood and lymphoid tissue, and if the leucocyte is a fixed cell—that is, if it is born and dies a leucocyte—it must arise from nothing but a leucocyte; but as the number per cubic milli- metre of blood (10,000) is quite constant, and lymphoid tissue maintains a constancy in mass, proliferation of these cells must be an active process, not only to supply the blood and lymphoid tissue, but also the lymph spaces, which are almost innumer- able, with cells.

Why should there be an emigration of leu- cocytes into these little spaces, especially during a normal condition of things?

It seems to me that emigration would be the other way, viz.,; from the spaces to the circulation. The emigration of leucocytes from the capillaries in the tissues has been observed many times; but most always in pathological conditions. In physiological conditions, however, this emigration is not so marked, and, in fact, would appear like a useless performance.

Observers, in the examination of the con- nective tissue lymph spaces, find and describe two or three kinds of cells: One a perman- ent cell of varied form, which, from its con- stancy, is termed a fixed connective tissue cell; another, from its amœboid character and supposed wandering tendency, is called a lymphoid, lymph cell, leucocyte, or white blood cell. A third, somewhat larger, is called by some "plasma cell."

The little cell has many names, and the confusion of names is no less than that of definitions. When we do not know what a thing is, it is a good plan to add the termi- nation "oid" to a word, as it sounds well, does not mean much, and enables us to glide smoothly over difficulties into inviting fields beyond, although in such a procedure a most important step is left out. In this way we build a superstructure without knowing much about the material of the foundation.

In the description of nearly all processes, whether physiological or pathological, the leucocyte is mentioned. It is evidently

a very important cell. The leucocyte does not always arise from lymphoid tissue. Klein pictures and describes small, polygonal, endothelial cells in the omentum which rapidly proliferate in a state of health; the offspring of these cells enter the circulation as white blood cells.

We know that the nuclei of connective tissue cells, under normal nutrition, will divide. This is a natural result of nutrition and growth. These new cells of various sizes would resemble leucocytes very closely, and the most natural place to find them would be in the lymph spaces.

Is it not reasonable to suppose that some of these cells, which are usually described as white blood cells emigrated from the blood vessels, are born in the lymph spaces, and enter the circulation as incomplete, formative, connective tissue cells?

In an abscess, we know that the large amounts of pus do not come entirely from the blood vessels, but that much of it is derived from tissue cells in the vicinity of the abscess. If pus and the leucocytes are one and the same thing, and pus is pathologically derived from connective tissue cells, may not the leucocyte be derived as well from connective tissue cells, physiologically?

The difference between a leucocyte in the blood vessels and out of them, is not an apparent one. The difference between leucocytes and pus cells is not an apparent one. A leucocyte with a germ does not differ from a leucocyte without a germ; but the product of the leucocyte and germ differs from the product of the leucocyte and a normal nutrition.

If the leucocyte differs from the pus cell simply in the germ, and a pus cell is the product of a connective cell and a germ, then it is reasonable to suppose that the product of a connective tissue cell and a normal nutrition is a leucocyte.

In the cavities of serous membranes, leucocytes are very few in number. Now why should these cells migrate from the blood into the minute spaces, and not into the serous cavities, if they are both alike? Would the tendency to migrate toward a large cavity be less than toward a small one?

The minute lymph spaces, therefore, are receptacles for young cells produced by the connective tissues, which enter the circulation as incomplete formative tissue cells, remaining incomplete until the process of repair creates a demand for new tissue. If this is so, may not leucocythæmia be due to an activity of connective tissue nuclei—as well as to lymphoid cells—by which, from faulty nutrition or stimulation, these cells reproduce too rapidly, thereby impairing the cells and causing, as a result, the anæmic condition and enormous increase in the leucocytes?

In this case the disease would be a disturbance in the connective tissues rather than in the spleen, lymph nodes, and marrow. The connective tissue, as has been shown, is more abundantly supplied with lymph spaces than any other. In the repair of all tissues the connective tissue is decidedly the tissue of repair.

Whenever there is a repair to be made, the plasma and leucocytes, so-called, are first on the scene of action; and whatever tissues or combinations of tissues. are to be united the union is always, at first, a connective tissue union.

Why are the so-called leucocytes always on the field? It is not probable they are there to pick up germs and try in some way to get into the circulation with them for the purpose of producing a septic wound. They are evidently needed in the reparative process, or they would not be there.

May they not be the same incomplete cells that originated in the lymph spaces, and are now completing themselves and forming a new connective tissue? On account of repair, then, the connective tissue would require the best possible nutritive arrangement.

The repair of cartilages is extremely slow, and may not occur at all if any amount of the tissue is lost by injury, and in cartilage the nutritive supply is perhaps less than in any other tissue.

Again the lymphatic system acts as a drainage system. Cells under nutrition live, and the processes of life are attended by excrementitious products, which are removed by the lymphatics and veins. Lymph contains more urea than blood. The lymphatic vessels are the sewer pipes. Red blood cells have been found 40 minutes after division of the tibial artery of the dog in the inguinal nodes of the same side.

India ink pricked into the finger will soon appear in the nodes at the elbow. Septic fluids from the dissecting room are often taken up and conveyed to the circulation. Bacteria from the food and atmosphere are frequently carried into the circulation.

There would seem to be a mistake in the plan upon which the body is constructed, if the lymphatic system is pre-eminently a drainage system. In the skin the lymph spaces are only perhaps $\frac{1}{100}$ of an inch from a surrounding atmosphere, teeming, it may be, with microscopic germs.

In eczema or any itching disease of the skin, the stratum corneum, stratum lucidum and stratum granulosum, may be destroyed or removed by scratching, and noxious agents would then find easy access to the circulation. In the mouth, lungs, and alimentary tracts, which are constantly in contact with food, or atmosphere, both of which may conceal hidden germs, the doors are easily unlocked and the enemy admitted to the peaceful inhabitants of the inner world.

With the lymphatic system, a drainage system chiefly, man is doomed at once to the inevitable. There is a constant powerful draught or suction force at work from the outside world to the inside world, throwing man upon the mercy of invisible atoms of death or placing his structural elements in line against the mighty array of bacteria, basing the law of battle upon the law of "the survival of the fittest."

As the people of a large city imply a supply system on the one hand and a sewer system on the other; so the vast aggregation of living cells of the body implies a nutritive system on the one hand and a drainage system on the other.

The drainage system is not constructed first but follows the construction of the nutritive. The existence of living cells necessitated nutritive lymph spaces, and the nutritive spaces necessitated the drainage system.

In as much as the surfaces of the mucous membranes of the body are constantly subject to the presence of germs in food and atmosphere, a filter is needed, and is provided in the masses of lymphoid tissue which are located at the inlets of the body and all along the line of drainage and nutritive systems.

Phagocytosis is not an acquired feature of leucocytes. The continuance of bioplasm or protoplasm depends upon nutrition. The phagocyte does not seize a germ and attempt to destroy it simply on account of a natural antagonism between the cell and the germ, but because all cells must eat to live.

Lymphoid tissue is not then an apology, but an achievement. It can not help doing what it does. Its location at the entrances to the body is not accidental. It is such that all lymphatic drainage passes through it.

The filter function does not seem to be the only function of lymphoid cells: This would be a rather low estimate of protoplasm. Lymphoid cells or leucocytes are bits of living protoplasm set free within the tissues of the body. Protoplasm is constructive and progressive. Leucocytes appear to be connected with constructive processes. In repair by granulation, if we examine the surface of the wound a few hours after its exposure, we will find it covered with a film of grayish-white appearance—which condition is due to leucocytes, or, as they are sometimes called, granulation cells. These cells are incomplete; but after a few days they complete themselves and a new, complete, connective tissue is formed.

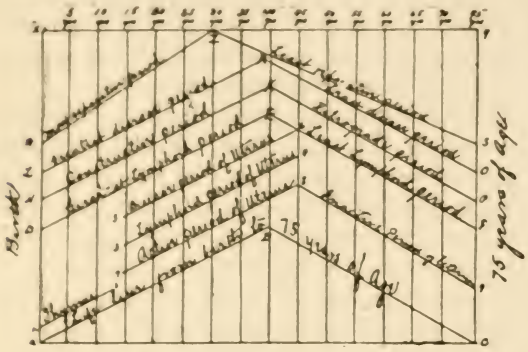
It seems to me there is a closer relation between a leucocyte and a connective tissue cell than between a leucocyte and any other tissue cell; and if a leucocyte ever makes anything but a leucocyte, it makes a connective tissue cell.

There would certainly be more of a demand for a free, reparative protoplasm, than for any other form.

Nobody has ever seen Cohnheim's embryonic cells wandering around in the body leisurely waiting for an opportunity to start a tumor, unless they have been observed every day, without the knowledge of the observer, under the form of leucocytes.

It is a fact that lymphoid tissue is best developed during the constructive period of life, and declines or atrophies at the close of that period. In a general way the first thirty years of life constitute the constructive period, and this is the period of greatest activity of the lymphoid tissue.

The greater lymphoid and constructive periods are synchronous. The lesser lymphoid periods and retrograde periods are synchronous. This may be illustrated by this chart:



The line A, X, represents birth, and C, Y, the age of 75 years. A line drawn through N, B, represents the period of life from 35 to 45 years of age, which is perhaps the best period of life.

A, B, C,—the life line—represents the period from birth to the age of 75. D, E, represents the period of greatest lymphoid activity, as described above. E, F, the period of least lymphoid activity. H, K, the period of growth and development, and: K, P, the period of retrograde changes.

Now the parallelism of the lines D, E, and H, K, represent the synchronism of the constructive, growth or development period, and the greater lymphoid periods.

The parallelism of K, P, and E, F, the synchronism of the retrogressive and lesser lymphoid periods. The line 1, 2, represents the period of existence of the thymus gland, which disappears about puberty.

During the active period of the uterus, the mucosa is described by some as lymphoid, and by others as embryonic. As soon, however, as the activity of the uterus ceases, the lymphoid or embryonic tissue of its mucosa atropies and disappears, as is seen after the menopause. That is, the periods of greatest uterine activity and lymphoid development are synchronous, and the periods of least or no uterine activity (menopause), and lymphoid atrophy, are synchronous. Again, the lymphoid or constructive period seems to correspond with the disease period.

If all the acute diseases of those who have attained the age of 75 were divided into two parts, the majority would be found to have occurred before 45. That is, there are more acute diseases in the first half than the last half of life; more during the lymphoid or constructive period than during the retrograde period. This is indicated on the chart by adding another line—L, N—which represents the greatest disease period from birth to 45; and N, O, which represents the least disease period from 45 to 75. We also see that these lines, L, N, and N, O, are parallel with the constructive and greater lymphoid lines before 45, and with the retrograde and lesser lymphoid lines after 45.

Failures in the reparative processes of amputations are more marked after 30 than before. In amputations taken as a whole, the failures in repair before 30 amount to 17 to 20 per cent.; after 30, from 34 to 42 per cent.; making a difference of from 17 to 20 per cent. The most reparative period, therefore, is indicated by the line W, Z, and the least reparative by Z, S. These lines correspond with the constructive and lymphoid lines on the one side, and with the retrograde and lesser lymphoid lines on the other.

The period of uterine diseases corresponds also with the greatest development of its lymphoid mucosa. This is indicated by the lines 5, 6, and 3, 4.

In typhoid fever the greatest number of cases occur under 30 years of age. After 40 there is a tendency on the part of the lymphoid Peyer's patches to atrophy; so that the disappearance of the disease corresponds to the atrophy of the tissue involved.

In a general way the same is true concerning other diseases. In acute diseases there also seems to be a difference in intensity of symptoms between youth, adult life, and old age. Old age seems also to enjoy an immunity from certain diseases. If this is so the free, incomplete, protoplasmic, lymphoid cells of early life, may stand in a causative relation to the difference between the intensity of acute diseases in the adult and old age, and also to the immunity from disease which to a certain extent exists in old age. Lymphoid activity is physiological and pathological activity.

Of course the connection between the greatest lymphoid, constructive, disease and

reparative periods, and the least lymphoid disease, reparative, and retrograde periods, may be a coincidence; but it seems to me to be something more.

Much depends upon the function of lymphoid tissue. The leucocyte is a representative of living protoplasm, handed down from age to age through the long line of the animal kingdom, and from the fact that it is always engaged in physiological and pathological processes, is ever before the eye of the careful observer, indicates its function is an important one.

The similarity of new cells is an obstacle to the investigation of any single one. If the leucocyte is an independent, individual cell, complete in itself, and allowed to wander about the body as a leucocyte and nothing more, its function is not an evident or a great one; but if the leucocyte is a general name for a free, incomplete, constructive protoplasm, its function is a very great one. The connective tissue may be the great formative tissue of the body and the leucocyte its offspring.

If so, upon the condition of this cell would depend the susceptibility of the body to disease, the intensity of pathological processes, and the reparative power of tissues.

The step between the physiological and pathological, the normal and the abnormal, is an exceedingly short one. Who can select any single cell under the microscope and tell whether it is normal or abnormal? This goes to show that one of the factors which is concerned in making a product, is always the same; and that the difference between the normal and abnormal, is due to the modification of the other factor.

If the leucocyte is an incomplete connective-tissue cell, the stimulation of germs, of ptomaines, or of prolonged mechanical or chemical irritation brought to bear upon it, would account for many so-called diseases. The histoid tumors are accumulations of over-excited and perhaps imperfectly completed connective tissues.

Inflammations are simply due to the activity of the same form of protoplasm. Fever is protoplasm aroused by an abnormal stimulant; pyæmias, and septicæmias, are due to leucocytes disturbed by the invasion of germs.

Failures in the repair of wounds are due to septic conditions of the reparative leucocyte. The connective tissues have no other object in view than to make a new tissue of the same kind, and if the incomplete cell, the leucocyte, is excited and hindered in any way, the result is what we call pathological.

In serous membrane and interstitial inflammations, the attempt is made to form a new tissue under a new stimulus; and a thickened pleura from pleurisy, a thickened peritoneum from peritonitis, a thickened pericardium or endocardium from pericarditis or endocarditis, and a thickened stroma of organs, are produced, which we look upon as disease.

The tubercle bacilli play back and forth between the cavity of the air cell and the lymph spaces in their walls, and arouse the cells to an unusual activity, and the product gives us tuberculosis.

Again, as we have seen, the period of greatest activity of the leucocyte corresponds to the period of greatest construction and disease, and the period of least activity of the leucocyte corresponds to the period of least construction and disease.

It seems to me, therefore, this fact tends to confirm the idea, and this theory of the leucocytes accounts more easily for the changes and variations in tissue formation, than any other. The whole object is constructive, but the structure may be modified.

True it is, that perhaps no one has ever seen a leucocyte make a connective tissue cell; equally true it is that no one ever saw a cell grow; no less true is it, that perhaps no one will ever witness these processes.

Growth, however, occurs; and the cells divide, and we see them after these processes have taken place. Who can look upon the living and see the life? Who can look upon matter and see force? And yet we can hardly doubt the existence of these attributes.

If the leucocyte is an incomplete cell, why does it not complete itself in the circulation? It may be for the same reason that the leucocyte does not disintegrate and set free the fibrin ferment and produce fibrin in the blood. In conclusion, then, the extent of the lymph spaces, their nutritive character and their close relation to the tissue cells; the constructive character of the connective

tissues and their relation to the spaces and leucocytes which are found in them; the constant presence of leucocytes in the reparative processes and the function which they seem to perform; the correspondence between the lymphoid, constructive, disease and reparative periods of life; all tend toward the belief that the lymphatic system is chiefly a system through which the construction of the body is accomplished and its integrity maintained.

Its drainage and phagocytic features are second in importance. Our familiarity with the leucocyte deprives it of the interest which belongs to it. We are too apt in the study of the cell, to start with the preconceived idea that the leucocyte is a leucocyte, and nothing more; that it is found in the blood; that it leads a playful, aimless life within the circulation, occasionally making its appearance as pus, for the purpose of exciting the usual pus arguments among physicians; but usually confining itself to secret chambers into which no one has the disposition to look or the courage to enter. The leucocyte seems to be an histological axiom and nobody says much about it.

If the future calls forth this cell from the unimportant position which it occupies in the text books of to-day, and places it on an eminence equal to that now occupied by bacteria, much will be learned concerning processes now beyond our reach.*

WITCHITA, KANSAS.

ON THE CONTAGION OF INFECTIOUS DISEASES.

BY DR. CADET DE GASSECOURT.

Doubtless, in small-pox we have an absolute prophylactic in vaccination, and in this the disease holds an exceptional place. We are unable to destroy, but we can attenuate the effects of contagion in other communicable maladies. In this connection, certain important questions present themselves:

1. At what period of duration are the infections diseases of childhood contagious:

2. At what period do they cease to be contagious:

3. What are the agents of the contagion, and what are the vehicles of these agents?

We are well aware that infectious diseases are divided into four periods—incubation, invasion, activity and decline; some even present a period of desquamation.

The period of incubation extends from the moment when the contagion finds a lodgment, to the appearance of the first symptoms. During this time the disease is latent, the morbid virus undergoing elaboration without revealing itself. The pathogenic microbes live and develop in the inmost recesses of the organism, but their secretions have not poisoned it. The individual seems well, and is, in fact, as the baneful influence of the microbe is not felt. During this period, the duration of which is variable according to the different diseases, there is no contagion to fear.

With invasion, the scene changes, for though the disease does not yet quite show itself, it exists, and the organism begins to be infected; hence the malady is now contagious; modern researches leave no doubt as to this fact,—we all know how easily measles and scarlatina are transmitted prior to the appearance of the eruption. The danger of contagion continues during the stationary period; it diminishes, but certainly does not disappear during decline. Lastly, the contagiousness of scarlet fever, in particular, is prolonged during convalescence, which is accompanied by a desquamation almost peculiar to this disease.

As to when infectious diseases cease to be contagious, is a query that cannot be answered as categorically. If we know diseases are contagious at their period of invasion and during the stationary period, it is because we have found them communicable at those times; while in order to know when the contagiousness ceases, we need a series

* REFERENCES.—Quain's Anatomy, 9th Ed.; Human Physiology—Landoise and Stirling, 2nd Amer. Ed.; Kirke's Handbook of Physiology, 12th Ed.; Yeo's Manual of Physiology, 4th Amer. Ed.; Flint's Physiology, 4th Ed.; Klein's Elements of Histology; Schafer's Essentials of Histology; Manual of Pathological Anatomy—Cornil & Ranvier; Prudden's Normal Histology; Handbook Pathological Anatomy and Histology—Delafield & Prudden; Reference Handbood of Medical Sciences; International Cyclopœdia of Surgery—Ashursts; Studies in Pathological Anatomy—Delafield; Cyclopœdia of Obstetrics and Gynæcology—Charpentier.

of experiments, such as bringing together the well and the sick at certain intervals after the activity of the disease has subsided, in order to make note of the moment when those exposed cease to contract the disease. Now as such diseases are oftentimes fatal, no one cares to undertake the necessary experiments. Moreover, the conclusions drawn might not be altogether decisive, for it has not been proved, and it is not probable that the duration of contagiousness is the same in all individuals; it is certain that the aptitude for morbid receptivity is not the same in all. We might experiment by means of animals, but unfortunately we lack the ætiological data on which to found these experiments. To inoculate the microbe, it would be necessary to cultivate it, and in order to cultivate, it would be essential to isolate, and this requires an acquaintance therewith. Unfortunately we yet know but one, the microbe of diphtheria. Again, the inoculation of animals presupposes a knowledge of the animal species most apt to contract the disease, a point regarding which we are still in the dark. At the same time, we cannot but have great interest in knowing the exact time when the contagious property of the disease is extinguished.

If we too early, give convalescing children their liberty, we run a risk of exposing others to contagion, while if we keep them too long in seclusion, we deprive of necessary exercise and air, perhaps interrupt their studies, hence the desirability of obtaining all the light possible on this question, the solution of which remains for the future.

We come now to the question of what the agents of contagion are, and whether the vehicles are the same at different periods of the disease. A short time since we might have replied without hesitation, that the infectious diseases have for their cause certain microbes. This affirmation may be exact, but it is entirely too absolute.

The microbe is an agent of contagion, but it is not the only one, and perhaps not even the most active; we have the ptomaines which are equally powerful for contagion. If proofs are desired, the bacteriological researches on diphtheria will furnish them, both negative and positive.

Diphtheria is quite often attended with albuminuria and paralysis; in cases where nephritis exists, we find no microbes in the kidneys; and when we observe the diphtheritic paralysis, we do not find microbes in the spinal cord. This is the negative proof.

Cultivate diphtheritic microbes in bouillon, sterilize the latter, and this culture will contain ptomaines, but not microbes; at the same time, this sterillized culture injected into the blood, will reproduce the disease. This is the positive proof. There are, then, two agents of contagion, the microbes, a living poison, and the ptomaines, a chemical poison.

As to the vehicles, that support these agents: We know, the infectious diseases are contagious at the period of invasion, of activity, and of decline; one, scarlet fever, is even contagious during the period of convalescence, which is accompanied with desquamation; we know also there are certain products completely detached from the body, such as the squamæ and the false membranes, that long preserve their contagious power.

We come now to the question: In what conditions is the contagion found during the different stages? For convenience, we select for an example and type, scarlet fever.

The period of invasion is characterized by the angina. At the period of eruption, the angina still persists, the skin is the seat of a special modification, and in both instances it is the liquids of the mouth which are the vehicles of contagion. As for the skin, the seat of the eruption, it is difficult to know if contagion can emanate therefrom; this is, however, probable, as later scales are thrown off. If a fact, during the period of desquamation and during the entire convalescence, even after complete recovery, these scales may scatter contagious principles far and wide.

There is another question which comes up in this connection, as to whether the microbes or ptomaines may be conveyed by means of expired air. This is an important question. If true, it is oftentimes a serious matter for persons to enter a sick-room, no matter how rigorous may be the endeavors to secure perfect antisepsis of the patient, for it is not easy to make the air of a room aseptic. If, on the contrary, the supports of the contagion are always liquid or solid, we might

hope by thorough asepsis, applied to the patient, bed-clothing, etc., to protect from danger, attendants and visitors; further, much less strict isolation would be required. Unfortunately, however, in measles and whooping-cough, we have no proof that the expired air is absolutely harmless.

Regarding the diseases the contagion of which is extinguished with them, we may leave to one side mumps, which has been little studied from this point of view, and confine ourselves to measles and whooping-cough.

The duration of incubation in whooping cough is, on an average, six to seven days; of measles, eight to ten days. This duration is not, however, absolute. But it is important to remember that during this period these two diseases are not contagious. The period of invasion presents sufficiently great difficulties, and is entirely contagious, while the diagnosis at this time is a matter by no means easy. Without doubt, the cough of these two diseases may take on particular characters, but the chances of mistake are numerous; and we are by no means always sure that we have not a simple case of cold to deal with. Nevertheless, while in doubt, common prudence will demand the precaution of isolation; for at this period of either malady, the disease, *per se*, is fully constituted, as the pathogenic microbe has infected the organism.

The eruptive period of measles lasts from three to four days, and is nominally contagious, but no more so than the period of invasion; only it is of such easy diagnosis that it is generally recognized. At the same time how many parents, especially among the working class, observe the appearance, and remain in utter ignorance of its nature till enlightened by others! As for the period of desquamation, it is but little marked, being characterized by the appearance on the skin of a sort of powdery, purfuraceous substance. The contagion during this period seems to be less active than in the preceding periods; but it is of importance to remember these fine purfuraceous scales, if they are really ever contagious, certainly lose that property after a few days.

It was once believed that the contagiousness of measles extended beyond a month, but to-day we know better, and, enlightened by facts, we feel warranted in giving morbillous patients their freedom after an isolation of fifteen days; there certainly is no occasion to enforce a longer quarantine. Some might ask why, in the case of so mild a disease, should we observe any precaution of sequestration? It is generally admitted that all children must have measles at some time, and why take any pains to avoid the disease?

People generally make too light of this affection; for it is untrue that it is always a benign malady, since only too often it entails death; if the children do not die of the disease, they not infrequently succumb to its sequelæ. This is especially the case with the very young, those in delicate health, and those that have been enfeebled by bad hygiene or previous disease.

It is important, then, for the benefit of this class of subjects (if for no other), to limit the spread of morbillous epidemics; and if any are to be exposed, it should be only the older and more vigorous; after the age of five years, the chances of broncho-pneumonia are less.

During the stationary or spasmodic period, characterized by coughing fits, the vehicle of contagion in pertussis is constituted chiefly by the glairy mucosities which flow from the mouth after the paroxysm. I say particularly (not exclusively), for in whooping-cough, as in measles, disease may possibly be transmitted by the expired air. The mucous products fall to the floor, or impregnate handkerchiefs, napkins, etc., and are very contagious. In measles, on the other hand, the buccal liquids are not expectorated by coughing; this is especially true with young children. It seems then, *a priori*, that if the buccal liquids were the sole vehicles of contagion, whooping-cough presents conditions much more favorable for dissemination of the germs, and consequently, it should be much more contagious than measles. The contrary is, however, true; in the scale of contagion measles occupies the first place, and whooping-cough only the fifth. We are then in the presence of a very embarrassing question, the solution of which, however, it is important to have, viz: What is the duration of the contagiousness of whooping-cough?

Roger, who has had vast experience, affirms that at the end of six weeks pertussis ceases to be contagious, but I cannot think this view absolutely established. On the other hand, it is difficult to believe that the duration of the contagiousness is as long as the existence of the paroxysms of coughing. There actually comes a moment when the fits of coughing persist, and yet the whooping-cough is terminated. All mothers know these terminal periods, which last several months; these paroxysmal coughing spells, which appear at intervals more or less irregular, and which are awakened under the influence of the least cold, some months, even, after the pertussis has totally disappeared. These late-occurring coughing fits, are they, or are they not, whooping-cough? Here we can reply unhesitatingly in the negative, seeing that children never have transmitted the disease during the period of these paroxysms.

The coughing fit is not, then, the absolute characteristic of the contagiousness of whooping-cough. We must have another criterion. Unhappily, this is what we have not. We can indeed admit, theoretically, that after the disappearance of the copious mucosities, when the spasm is no longer followed by glairy expectoration, the contagion is no longer to be feared; only, I would not dare apply this theoretical view to practice, despite its great probability, and I think it wise to await the end of the paroxysmal period, at the risk of prolonging the isolation without utility. This is, one of the inconveniences of our ignorance, which we cannot well help.

A propos of the periods of invasion and activity of scarlatina, I have nothing to add to what has been said of measles and whooping-cough. It is the period of desquamation that is peculiar and which begins soon after disappearance of the fever; and it is then that contagion is most to be dreaded. The scales contain the virus, and the disease may be communicated by contact or by transportation to a distance. There are numerous examples on record of the contagiousness of these products and the persistent duration of the virus.

A child, ill of scarlet fever, occupied a certain apartment; after recovery, the room was properly disinfected, as was supposed; two months afterward, a younger brother spent a day in the apartment, and in less than a week came down with scarlet fever.

A lady living on the border of the Rhine was recovering from scarlet fever. She wrote a letter and while writing complained of the "dust" which peeled from her hands, and which obliged her continually to blow on the paper to clear it off. The letter was sent to a friend in Brittany, who opened and read it in the presence of her daughter. Both contracted scarlet fever.

A young boy was treated in Paris for scarlatina. Three months afterward, he joined his brothers and sisters at Castres. One day while out for a walk, one of the sisters complained of feeling cold; the governess pulled a scarf from her pocket and put it around the child's neck. The scarf had unfortunately been worn by the little boy through his sickness and had not been disinfected; the sister come down with scarlet fever in the course of a week after the exposure.

Dr. Hildebrand treated a certain number of patients for scarlet fever. At the moment of leaving the city to go to his home in the country, he put into his carpet-bag the coat he had worn while attending his patients, where it remained more than eighteen months. One day, in a new locality, he unfortunately put on the old coat, and made several sick-calls; several days afterward, a little epidemic of scarlet fever broke out in that neighborhood.

In diphtheria, the sub-stratum of the contagion is solid; the virus resides in the false membrane, either fresh or dried. If the liquids of the mouth are vehicles of the poison, it is through the fragments of false membrane which they contain. The pseudo-membranes are thicker and heavier than the scabs of scarlet fever, and their dissemination to a distance is the more difficult, but they long preserve their contagious property.

A citizen of Paris had in his private rooms, at his hotel, a child sick with diphtheria. The child recovered, and went into the country, rejoining his brothers and sisters. During the entire summer, the children were well. In the winter, they went back to their hotel in Paris. Immediately two of the

children contracted diphtheria. These recovered, and again all went into the country. The following year, they returned to their rooms in the hotel, diphtheria again broke out, and one of the children succumbed.

A boy five years old died of diphtheria, and the room was left just as it was at the time of death, without any change of furniture, tapestry, or hangings, through the folly of the mother, who wished thus to keep fresh the memory of her child. More than two years afterward, the second child, aged four years, obtained permission to sleep in this room and within three weeks contracted a fatal diphtheria.

Darolles gives another account, which he calls the "History of a Cradle." In the course of an epidemic in the country, an infant died in a wicker cradle, of diphtheria. Darolles urged the parents to destroy the cradle, but they refused. Eighteen months afterward, another infant contracted diphtheria in the same place, at a time when the disease was unknown in the village, and died. Again the physician urged the parents to destroy the cradle, and again they refused. Two years afterward a third infant contracted diphtheria, in the same cradle, and got well. A year later, the same infant was again taken with diphtheria and recovered. Then the parents consented to destroy the cradle, and there were no more cases of diphtheria in that family.

Paris, France.

TREATMENT OF HEADACHES BY NITRO GLYCERIN.

Dr. Trusevich publishes (in Ejenedelnaya Klinischeskaya Gazeta) a series of observations on the effect of nitro-glycerin on headaches.

The preparation generally used was the 1 per cent. alcoholic solution, though in a very obstinate case the 10 per cent. solution was used, two drops being first given, and, after an interval of two minutes, three more. As a rule, two or three one-drop or two-drop doses of the 1 per cent. solution placed on the tongue at intervals of a very minutes, sufficed to arrest the headache. The conclusion arrived at was that all cases which depended entirely, or almost entirely, on a vaso-constrictor neurosis, are immediately curable by nitro-glycerin.

Correspondence.

BERLIN LETTER.

Prof. Oscar Liebreich of Berlin, the distinguished discoverer of hydrate of chloral, has again appeared before the professional forum claiming to have found a remedy which can cure consumption, particularly the laryngeal type, while being absolutely void of danger or even undesirable secondary after-effects. Both the principle announcement and the additional assurance, would ordinarily have sufficed to create a widespread sensation among the profession and laity; but unfortunately, our enthusiasm in the Koch discovery has received such a damper that even should Virchow announce he had found the long-sought elixir of life, we would hear it unmoved. "I try everything and reject everything," says Henod. "For pertussis, I have tried 50 new remedies within the last 15 years, and I still stick to morphine." The discovery business, which of late has been carried out on the wholesale plan by German doctors and chemists—just think of Radlauer, the wholesale discoverer!—is, and ought to be, played out, after the downfall of Koch's gigantic work. Liebreich, though refusing to be interviewed in the matter, has, nevertheless, volunteered to make a few statements for the interest of American practitioners. The Liebreich remedy has nothing at all to do with bacteriology or biology. The remedy is to be applied subcutaneously, like Koch's, but is absolutely non-poisonous, and not followed by any reactions like fever or swelling. While "tuberculin" attacks the tissues in which the tubercle bacilli are lodged, the Liebreich remedy attacks the tubercle bacilli themselves. The bacilli are, as it were, paralyzed, or rather, rendered unable to move about. They attain a certain state of rigidity which ultimately leads to their morphological degeneration and destruction. It is evident that, *a priori*, Liebreich's method, which attacks the tubercle bacilli themselves instead of the surrounding tissue, appears the more rational and successful one. We fear, however, that it is too much to hope that Liebreich's claims will be substantiated.

Thus far clinical trials with the Lieb-

reich remedy, have been made exclusively in the polyclinic of Prof. B. Fraenkel and Dr. Paul Heymann, and with undeniably astonishing results. Liebreich will guard his remedy until extensive clinical experiments have absolutely proved its efficiency and harmlessness; it would consequently be useless to state conjectures as to its nature.

I wish I could be relieved from talking of the Koch cure, but I know a medical letter from Berlin must contain some news about Koch and his discovery.

I think the completion of the eight barracks begun on the Charitè Campus will probably be the only noticeable sequence of the discovery, heralded to the world with so much noise. While incessant trials are still carried on, and speak partly in favor and partly against, it can be said with certainty the remedy will never attain a general acceptation as long as its dangerous character remains unchanged. Consumptives have rarely any oppressing pain, nor do they—fortunately for themselves—believe in their near end, hence are not going to submit to a remedy which they know may precipitate their death through miliary tuberculosis, hæmoptysis, or intestinal perforation. Besides, in the advanced phases of tuberculosis, "tuberculin" is—as Koch himself acknowledges — out of place, while in its initial stage, medication is seldom sought or administered rigidly. It is rumored here that Koch will undertake new experiments, and try to work out a cure attacking the bacilli themselves. Recent reports also state that the Government will refuse to spend money in the matter, and von Gossler, the Secretary of Cult, will retire from his office, unwilling to see the failure of a matter which he had pushed so vigorously.

By a strange coincidence, the daily papers published to-day two important facts, concerning the Koch cure, which oppose each other. The Russian Government interdicted the further exhibition of the "lymph" in all state and military hospitals; while Surgeon-General Coler, of the German Army, orders the erection of a special Koch ward for all military hospitals. Two interesting papers on the subject are also out to-day. Prof. Rosenbach, of Breslau, maintains that the febrile reaction of the "lymph" injections can be counteracted successfully by the administration of analgesin, provided the drug is given before the action of "tuberculin" sets in. In another paper, Prof. Schreiber, of Koënigsburg, describes his experiments made with the "lymph" on new-born children. The fact that infants are, in exceptional cases only, tubercular, render these experiments very instructive. Schreiber found that the reactive fever did not set in at all, not even if excessive doses, such as 5. c. c., were given.

Just before closing my letter, I learn that Liebreich has been elevated to the rank of Privy Sanitary Councillor, no doubt as a first reward of his announced discovery. Possibly it would have been preferable to await the results of general clinical trials of his cure. I also learn of two conjectures concerning the nature of Liebreich's remedy. According to one version, it is a well-known lactate, which has long been administered locally; according to another, it is one of the many anæsthetic remedies with which Liebreich has experimented for some time. *Qui vivra verra.*

THE POSSIBILITIES OF MEDICINE.

A Brooklyn correspondent sends a report of an address delivered by Dr. T. Gaillard Thomas, at the Brooklyn Academy of Medicine, March 12th, to the graduating class of the Long Island Hospital Medical College:

The lecturer traced briefly the history of medicine, and showed how, one by one, various scourges had disappeared. Many of them, like typhus, jail, and spotted fever, had either been swept out of existence, or else they were "held securely in leash." Dr. Thomas referred to the recent discoveries in regard to the nature of bacilli. When the grand fact was established that diseases were transmitted from individual to individual by organisms styled "bacilli;" that by the growth of these organisms diseases were perpetuated upon the earth; and that by their destruction the affections to which they gave rise might be prevented; one of the greatest discoveries of any age was made. This statement had no reference to the work actually performed by Pasteur and Koch, but to the principles which underlie the labors of the great men, whose initial discoveries rendered secondary discoveries possible.

Although by no means proved, it appeared probable that in the animal system there

were elements which furnished food for certain "bacilli," which, being attacked by these, helped them to flourish so luxuriantly that their multiplication excited a tremendous reaction in the animal economy, which often ended in death. These elements, once destroyed, did not reproduce themselves, and the recurrence of a successful invasion by that particular "bacillus" was not possible. The discoveries of Jenner in vaccination were briefly traced. "Jenner's discovery," Dr. Thomas said, "was the result of empirical observation; the discoveries of Koch are guided by the pure and certain light of science."

The earlier work of Metchnikoff in bacteriology was briefly sketched. In conclusion, Dr. Thomas said: "The reward of the physician whose happy discovery stamps out a disease, which before his day slew its thousands, comes from the hand of no emperor, his glory from the appreciation of no applauding multitude, his renown from the pen of no fulsome historian. . . . Medicine is the noblest of professions, the meanest of trades. Unless you can live lives of purity, of virtue, of honor, and of honesty, seek a livelihood elsewhere.

THE RED-ROSE PETALS AS A REMEDY FOR DIARRHŒA.

Dr. Alexeevsky, of Tambov, draws attention of the profession to a simple, cheap, and safe method of treatment of diarrhœas, borrowed of the Russian popular medicine, and consisting in the internal administration of an infusion of the red-rose petals (*flores rosæ rubræ* or *domesticæ*, obtained from the *Rosa Gallica L.*) A large pinch of the dried flowers should be taken to each tumblerful of hot water, and the vessel (carefully covered with a saucer or any other suitable object) left to stand in some warm place for about two hours. An adult should be given two or three tumblersful of the infusion a-day; the daily dose for a child under five being a tumblerful or a cupful (given by portions in the course of the day). No sugar should be added, since otherwise "the taste of the remedy would be spoiled still further." The author tried the method in a series of chronic cases, selecting always such ones where a preceding treatment by various ordinary means had utterly failed to afford any relief. The results were invariably brilliant.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE PATHOLGOY AND TREATMENT OF A COLD IN THE HEAD.

The French name by which a cold in the head is still designated—*rhume de cerveau*—is a reminder or relic of the old belief that in coryza the secretions of the nose flow down out of the brain. This notion was first demolished about 1660, by Schneider, from whom the name *Schneiderian* membrane, applied to the nasal mucous membrane, is derived.

"Catching cold" is essentially a nervous phenomenon. The whole body, or some part of it, has been exposed to cold—more generally cold and wet, for people do not, as a rule, contract catarrh by even prolonged exposure to dry cold. A morbid impression is made on the plexuses of afferent nerves underlying the skin or mucous surface which has been subjected to the cold; this impression is conveyed to the nerve centres, and reflected by them along certain other channels that are endowed with special susceptibility to this kind of stimulus. Should the affected tract be sensory, we get rheumatic pains or neuralgia; should the vaso-motor centre be implicated, alterations in the calibre of the blood-vessels may result, as vascular dilatation in particular areas. Inflammatory processes may be attributed to a transfer of the stimulus to trophic nerves; should the heat-regulating centre be affected and its activity depressed, fever may result. In many persons, certain channels seem to be specially open to these reflected stimuli, so that whatever region of the surface be cooled down, the same disorder invariably ensues, and the particular organ thus chosen may fairly be termed a *pars minoris resistentiæ*.*

* Ziemssen's Cyclop., vol. xvi, part I.

This is the explanation given by Seitz, and the one generally held, with certain modifications. The shock produced by the chilling of certain nerve territories, disturbs the balance between the several parts of the nervous system; the vaso-motors at first contract, then are paralyzed, and local congestions take place. This, however, does not explain the inflammatory (catarrhal) processes, which demand some irritant (chemical or living) agent capable of acting upon and altering the walls of the blood-vessels.

Some assume a direct alteration of the affected part by the cold; the sudden cooling of the mucous membrane or of the internal viscera (whatever may be the part of least resistance), cannot but cause local damage and impaired vitality. Others hypothecate an invasion of the weakened parts (including the blood-vessels) by microbes. The latter view is most in accordance with the pathology of the present day, and accounts for both the inflammatory *noxæ* and the phenomena of suppuration.

This theory, moreover, finds support in the fact that the causes of acute coryza, apart from cold and wet, are certain mechanical, chemical, or vegetable irritants (the inhalation of metallic dust, fumes of strong acids, certain kinds of pollen), or certain poisons of an infectious order, such as the virus of measles, whooping-cough, influenza.

The first indication of treatment is prevention. The individual who is susceptible to colds in the head should pay especial attention to hygiene; should live well, obtain all the sleep he requires, avoid excessive fatigue, and wear clothing suitable for all the vicissitudes of the weather. Too great pains in the avoidance of wet feet cannot be taken; in the winter time one if not two pairs of wollen socks should be worn with water-tight arctics, and rubber boots only occasionally, in very rainy weather when nothing else will protect the feet. These are trite precepts, but the physician cannot too much insist on their observance. If the person who would carry out a regimen of prophylaxis, would adopt a rigorus course of hydrotherapy, he will find the cold douche or plunge in the morning a most invigorating mode of treatment, promoting the tonicity of the superficial blood-vessels, and lessening the impressionability of the peripheral nerves. Many who were formerly great sufferers from catarrhs, have found the cold bath in the morning an admirable preventive.

Exercise in the open air is also an essential part of prophylactic treatment; to be fortified against inclement weather, one must resolutely meet such and be able to react against it.

The second indication is to abort the cold at its onset. Nature, it is said, sometimes attempts to do this by a fit of sneezing; the nerve centers are aroused from their collapse by the explosive influence of the sneeze. This is sometimes brought about by a pinch of snuff; "the sneezing suffices to recover the nervous system quickly from its depression."* A little brisk exercise will sometimes speedily restore the embarrassed circulation. Some have great faith in a full dose of quinine, ten grains; others advise salicin in pretty large doses, 20 grains every two hours (Maclagan). The best thing to be done, in many cases, when, following the exposure, there are chilly sensations, sneezing, stiffness in the nostrils, general malaise and feverishness, is to give up and go to bed, take a cup of fluid beef or hot ginger tea, ten grains of acetanilid, or a Dover's powder, and try to promote free perspiration. Snuffing up the nostrils a little morphia (one-eighth to one-fourth grain), or morphia and bismuth (Ferrier's snuff), on going to bed will sometimes allay all local irritation, and quiet the general disturbance; and the patient wakes in the morning all right again. Menthol ointment (3 per cent.), or a menthol spray (menthol 1 part, liquid albolen, 30 parts) is a charming local antiseptic and sedative remedy for colds in the head.

Inhalations of carbolic acid; spirits of camphor in hot water; or aromatic ammonia, sometimes will arrest a cold, and they are useful in all stages, by allaying congestion, and perhaps by destroying microbes. For hay-fever, Binz formerly recommended snuffing or spraying, a watery solution of quinine in order to stop the growth of organisms in the nose. Some, as Brunton, have found this very effectual.

*Lancet, Nov., 24th, 4883, p. 912.

When the cold is established, it is sometimes possible, if not to cut short the coryza, at least to make the condition of the patient more comfortable by means of a pill containing $\frac{1}{100}$ grain of atropine. This treatment was first recommended by Dr. Gentelhomme, of Rheims.*

The general remedies to be employed during the active or stationary period of a coryza, will necessarily vary according to circumstances and patients. Sometimes palliatives will be especially indicated, among which inhalations of the vapor of hot water with camphor, menthol, eucalyptus, carbolic acid or thymol occupy an important place; spraying in the stage of profuse secretion is not of much use. A mixture of equal parts of chloroform, alcohol, spirits of camphor, and carbolic acid, to be inhaled from a wide mouthed bottle, will sometimes give much relief. A dose of chloral, sulphonal or paregoric may be needed at bed time. Sometimes it may be desirable to give a febrifuge; spirits mendererus with nitre or aconite. At other times, tonics from the very first will be required. Throughout the attack, the diet must be plain, and should be largely, if not exclusively vegetable. An occasional cup of hot milk with a little whiskey, bouillon, or gruel may be taken where there is no appetite for solid food.

Recently Dr. J. H. Whelan, in the Practitioner, has proposed the following formula:

℞ Quiniæ sulph., gr. xviii.
Liquoris arsenicalis, ♏xij.
Liquor. atropinæ, ♏j.
Ext. gentianæ, gr. xx.
Pulv. gum. acaciæ, q. s.
ut. fiant. pilulæ, No. xij.
Sig. One every 3, 4 or 6 hours, according to circumstances.

If these pills be commended in the early stage of a common cold, says Dr. Whelan, the affection will be nipped in the bud. "If a catarrhal subject has a box of these pills always at hand, he has a weapon wherewith to meet and defeat his enemy." It is believed to act "as a powerful nervine and general tonic."

Dr. Leonard Sedgwick, in the British Medical Journal, May 28th, 1888, proposes the following treatment of a cold. At the very outset of the attack, give the following mixture:

℞ Liq. morph. acet., ♏xxx.
Liquor. ammon. acet., ʒ vi.
Spts. chloroform., ʒ j.
Aquæ camph., ad ℥ vj.
M. A tablespoonful to be taken in the forenoon and afternoon and two tablespoonsful at bedtime.

If there be an irritable, dry cough, give in addition, one drop of wine of ipecac, in a teaspoonful of water every five or six minutes, four or five times in the day, if necessary. Two days of this treatment, he says, destroys most colds, and the cure is confirmed by a grain of quinine, taken dry on the tongue in the forenoon of the two or three days following.

* Lancet, Sept. 2d, 1882.

DIET FOR INFANTS.

The problem of the artificial feeding of infants is one of grave interest to physicians in view of the infant mortality rate from lack of proper nutrition and the impaired physical stamina that children acquire from insufficient or inappropriate diet in infancy.

Any contribution to the existing knowledge of this subject therefore, though already a hackneyed one in medical literature, must be regarded with interest.

Only he who has been confronted with this problem of infant feeding can appreciate its difficulties. Such an one soon learns that a food that one case thrives on, is insufficient for another. One cannot, therefore, meet individual indications without some experimentation, and a change should be made to suit the varying conditions of the individual case.

It is not our purpose to solve the problem of infant feeding, however, but to merely point out the inadequacy of routine practice and selection in infantile diet, and especially the lack of some condensed milks in adaptability for perfect nutrition.

In a paper published by T. Eustace Hill, M. B., B. Sc., in the Birmingham Medical Review, January, 1891, entitled "Condensed Milks, Their Influence on the Health of Infants," the author points out the fact, too little recognized, that many condensed milks are lacking in nutritive value, and if used as specified by the manufacturers, largely diluted, afford insufficient nutriment for most infants. He particularly condemns the sweetened varieties of condensed milk, and considers that children fed exclusively on these are liable to scurvy and other effects of mal-nutrition.

He regards the fresh milk of the cow the best substitute for mother's milk with the addition of three teaspoonsful of milk-sugar to a half pint of a mixture of one pint of fresh milk and one-half pint of pure boiled water. If it be found that this fails to agree with the child, he suggests the use of one-half pint of lime-water in diluting the milk, instead of ordinary water, and the necessity of administering the mixture properly warmed, and in scrupulously clean feeding bottles.

In this connection it may be of interest to present a method of preparing cow's milk which is strongly advocated by Barton Cooke Hirst, M. D., in an article entitled "An Effort to Obtain a Perfect Substitute for Human Milk," read before the College of Physicians and Surgeons of Philadelphia, January 7th, 1881. Dr. Hirst's directions as to his method are as follows:

1. Have ten nursing-bottles prepared clean every morning.
2. Take

Cream	5 ozs.
Milk	2½ ozs.

3. Put in skillet; add pancreatin powder; heat over alcohol flame for six minutes; stir and sip constantly; *do not overheat.*
4. Of this mixture, put in each bottle 6 drachms (to make 2-oz. bottle). Use funnel.
5. Add to each bottle 10 drachms sugar solution.
6. Stopper the mouth of each bottle with dry, baked cotton, and sterilize for twenty minutes.
7. Set aside to cool.
8. Before use, put bottle in warming-cup; apply nipple immediately before giving it to infant.

Make sugar solution by dissolving 1 ounce sugar of milk (one powder) in a pint of warm water.

Age.	Interval.	No. of feedings in 24 hours.	Amount of food at each feeding.	Total amount in 24 hours.
1st week	2 hours.	10	1 oz.	10 ozs.
2d to 4th week	2 hours.	9	1½ oz.	13½ ozs.
2d to 3d month	3 hours.	6	3 ozs.	18 ozs.
3d to 4th month	3 hours.	6	4 ozs.	24 ozs.
4th to 5th month	3 hours.	6	4-4½ ozs.	24-27 ozs.
6th month	3 hours.	6	5 ozs.	39 ozs.
8th month	3 hours.	6	6 ozs.	36 ozs.
10th month	3 hours.	5	8 ozs.	40 ozs.

The pancreatin powder, for the quantity indicated on the card, consists of

℞ Pancreatin	2½ grains.
Bicarbonate of sodium	5 "

The sodium salt furnishes the alkalinity desired, so that lime-water may be dispensed with.

Book Notices.

PRINCIPLES OF SURGERY. By N. Senn, M.D., Ph.D. Cloth, 8vo.; pp. 611. Price, $4.50. Published by F. A. Davis, Philadelphia.

The author's valuable contributions to intestinal surgery make a work of general surgery from his pen of great interest to the profession. With few exceptions treatises on surgery have little that is new to add to existing knowledge. The recent advances in surgery have been chiefly in intestinal, abdominal and cerebral surgery, and these advances have been in the direction of increased skill in manipulation, management and expertness in operative procedures rather than in pathology.

It follows that the character of a general consideration of the principles of surgery must be, to a certain extent, a compilation of the views of other authors. Dr. Senn has drawn largely from Klein, Schäfer, Hertzmann, Satterthwaite, Klebs, Hamilton, Birch-Hirschfield, Paget, Virchow, Coates, Lebert, Rindfleisch, Delafield, Prudden, Koënig, Hueter-Lossen, Landuer, Billroth-Winniwarter, Van Buren, Fluegge, Baumgartner and Cruikshank.

The work is of interest then, as a compilation of existing knowledge in the field it covers, which comprises a consideration of Regeneration, Inflammation, Pathogenic Bacteria, Necrosis, Suppuration, Septicæmia, Pyæmia, Erysipelas, Tetanus, Hydrophobia, Surgical Tuberculosis, Anthrax and Glanders.

It is a work rather for the student and general practitioner than for the specialist in surgery.

It is illustrated with 109 wood engravings, well printed and tastefully bound.

THE COSMOPOLITAN FOR APRIL.

No more completely illustrated copy of the Cosmopolitan has ever gone out than that for April. Miss Elizabeth Bisland, always a bright and attractive writer, is fairly fascinating in her description of dancing, the eldest of the arts, and the illustrations charmingly interpret the article itself. The executive mansion, the "White House," always an object of interest to the people of the United

States, and one of the first points to be visited by those who go to Washington, is described by Mr. George Grantham Bain, the Washington correspondent, while the interior is illustrated with many views taken specially for the Cosmopolitan by permission of the President.

Perhaps the feature which will appeal most strongly to literary people, is Brander Matthews' article on the Women Writers of America. Mr. Matthews' criticism should be read by every American woman who writes for the press, magazines, or the book publisher. Mrs. Cruger, Amelie Rives, and all the best modern writers, come in for a touch of criticism.

The Nicaragua Canal is described and illustrated by Harvey, and the Japanese theater by Miss Scidmore. Samples are given of the best work of Meissonier, and Frederic Villiers tells the curious story of a war correspondent's life.

The frontispiece is a portrait of General Sherman drawn by Gribayédoff, and Sherman and Bismarck come in for the major part of Murat Halstead's Review of Current Events.

HEREDITY, HEALTH, AND PERSONAL BEAUTY. By Jno. V. Shoemaker, M D. Cloth, 8vo.; pp. 422. Price $2.50. Published by F. A. Davis, Philadelphia.

One may scoff if they choose at a medical author considering heredity, health, and beauty, rather than disease. We can not but believe, however, that the broad minded and philanthropic physician is daily growing more interested in the ætiology of departures from health seeking in causes of disease, their removal as the proper solution of the question of cure.

Heredity is an all important factor in modifying the course and treatment of disease, and he who ignores its significance must fail to fulfill acceptably the duties of medical councilor.

Health and personal beauty, all normally constituted human beings aspire to, and who so proper a guide to the laws of health, and their bearing on character and appearance, mental and physical, as the physician?

Impostors and charlatans have too long absorbed the field of advising how health and beauty may be secured and maintained, and failing to recognize the real causes of ill-health or ugliness, are daily misleading and deceiving thousands with false promises, and impotent or positively harmful methods; falsely guaranteed to cure all ills that flesh is heir to.

Such a work as Dr. Shoemaker has written, therefore, pointing out rational methods of living and innocuous means of combatting hereditary tendencies and personal defects, must do much to establish sound views on this subject of so much interest to the average patient.

The laws of health, the care of the body, the selection of proper food, clothing, ventilation, exercise, are topics, about which the successful physician must be fully competent to give advice.

KOCH'S REMEDY IN RELATION SPECIALLY TO THROAT CONSUMPTION. By Lennox Browne, F.R.C.S., Ed. Illustrated by thirty-one cases and by fifty original engravings and diagrams. Lea Bros. & Co., publishers, Philadelphia. 1891.

While the experience of those investigating Koch's lymph as a remedy for tuberculosis has been varied, many questioning its value in advanced cases of pulmonary tuberculosis, most observers agree as to its efficacy in local manifestations of the tuberculous process. Thus, in lupus it has been used with much success.

This book therefore, recording the experience of so prominent a specialist as Lennox Browne with the use of Koch's lymph in laryngeal phthisis, is an opportune and highly interesting contribution to the literature of this subject.

The author discusses the clinical history of laryngeal tuberculosis, its histological features, the *rationale* of the treatment, indications and contraindications for the adoption of Koch's remedy, general directions for treatment; and presents a summary of results obtained in thirty-one cases. He reaches the conclusion that his results are suchas to warrant perseverance in the employment of this method, due care being exercised in the selection of patients and in the details of its application.

THE DAUGHTER—HER HEALTH, EDUCATION AND WEDLOCK. Homely Suggestions for Mothers and Daughters. By William M. Capp, M. D. F. A. Davis, Philadelphia, Publisher, 1891. Price $1.00.

This is a collection of instructions and suggestions designed to inform those contemplating wifehood or motherhood of such facts regarding the duties of these states as shall enable them to intelligently perform them.

It is not intended therefore for the medical reader but rather as an aid to the proper interpretation and execution of the medical attendants orders and advice.

It is therefore written in a popular vein and communicates in simple untechnical language, hints as to the proper management of infancy, childhood, wifehood, and motherhood, and suggestions as to what should be done to secure symmetrical development, and maintain good health. These indications it fittingly fulfills.

THE YEAR BOOK OF TREATMENT FOR 1891. A Critical Review for Practitioners of Medicine and Surgery. Published by Lea Bros. & Co., Philadelphia, 1891.

This work is intended to fulfill the purpose of a concise epitome of the most important articles on medical topics published during the year succeeding its last issue. It comprises 468 pages of such articles, and has a complete index of subjects and authors.

When one considers the vast amount of clinical experience published each year, to much of which few physicians have no access the convenience of such a compilation for reference will be appreciated.

DIABETES—ITS CAUSES, SYMPTOMS AND TREATMENT. By Charles W. Purdy, M. D. With clinical illustrations. Published by F. A. Davis, Philadelphia. 1891. Price $1.25.

While we find nothing new in this discussion of diabetes, it affords a very good summary of the present state of knowledge of this disease. The climatic and dietetic management are minutely described and many valuable hints given as to the environment and conditions necessary to relieve the graver symptoms.

Notes and News.

Meetings of the Medical Associations.—

The names and addresses of the Secretaries, and the dates and places of meeting of the various medical Societies, are often desirable as well as convenient for reference, consequently we present these below so far as can be ascertained for the current year:

American Medical Association, Washington, May 5th, W. B. Atkinson, Philadelphia.

Alabama. Huntsville, April 4th, T. A. Means, Huntsville.

Arkansas, Hot Springs, April 20th, L.P. Gibson, Little Rock.

California, Sacramento, April 21st.

Colorado, Denver, June 16th, C. Parkhill, Denver.

Connecticut, Hartford, May 27th, M. E. Worden, Bridgeport.

Dakota, N., Fargo, May 26th, Dr. Rounseville, Larimore.

Dakota, S., Chamberlain, June 10th, A. C. Warne, Mitchell.

Delaware, Rehoboth June 9th, W. C. Pierce, Wilmington.

Florida, Pensacola, April 14th.

Georgia, Augusta, April 15th.

Illinois, Springfield, May 19th, D. W. Graham, Chicago

Indiana, Indianapolis, May 18th, E. S. Elder, Indianapolis.

Iowa, Waterloo, April 15th, C. F. Darnell, W. Union.

Kansas, Wichita, May 13th, Dr. Lindsay, McPherson.

Kentucky, Lexington, May, J. Steele Bailey, Stanford.

Maine, Portland, June 9th, C. O. Smith, Portland

Maryland, Baltimore, April 28th, Lane Taneyhill, Baltimore.

Massachusetts, Boston, June 9th.

Michigan, Saginaw, June 11th, C. W. Hitchcock, Detroit.

Minnesota, Minneapolis, June 18th, C. B. Witherle, St. Paul.

Mississippi, Meridian, April 15th, D. S. Rhodes, Madison St.

Missouri, Excel. Springs, May 12th, J. C. Mulhall, St. Louis.

Montana, Helena, April 24th, J. H. Owing, Deer Lodge.

New Hampshire, Concord, June 15th, G. P. Conn, Concord.

New Jersey, Long Branch, June 23d, W. Pierson, Orange.

New York Association, New York, October 28th, E. D. Ferguson, Troy.

North Carolina, Asheville, May 26th, J. M. Hays, Oxford.

Ohio, Put-in-Bay. June 9th, G. H. Collamore, Toledo.

Pennsylvania, Reading, June 2d, W. B. Atkinson, Philadelphia.

Rhode Island, Providence, June 11th, W. R. White, Providence.

Texas, Waco, April 28th, F. E. Daniels, Austin.

Vermont, Burlington, October 15th, D. C. Hawley, Burlington.

Washington, Seattle, May 6th, C. L. Flannigan. Olympia.

West Virginia, Fairmont, May 20th, J. L. Fullerton, Wheeling.

Wisconsin, Madison, June 3d, J. R McDill, Milwaukee.

The New York State Society held its meeting for 1891, in February, hence does not appear on the list; the Secretary, however, is Dr. F. C. Curtis, of Albany.

The Nebraska meeting is to be held in Lincoln, but the date has not been announced; Secretary, Dr. W. J. Hildreth, of Lyons.

The Secretary of the Virginia State Society is Dr. Langdon B. Edwards, the erudite editor of the Medical Monthly, residing at Richmond. Lynchburg is the next place of meeting, but the date remains to be announced.

We have been unable to obtain the names of the Secretaries of the South Carolina and Tennesee Societies; and the time and place of meeting of the former has not been announced; the latter convenes at Nashville, April 14th.

Dr. P. B. McCutcheon, of New Orleans, is Secretary of the Louisiana Society, but the date and place it is not customary to announce until a short time before the meeting.

Maternal Impressions.—

The Edinburgh Medical Journal, for January, 1891, contains an address read by Dr. J. W. Ballantyne before the Edinburgh Obstetrical Society, in which he reviews the subject of maternal impressions, and reports four cases. In one, a woman having an aversion to frogs was terrified early in her first pregnancy by a dead frog thrown at her by a friend. At term she gave birth to an anencephalic child. Becoming pregnant a second time, she was again delivered of an anencephalic infant. The significance of this case is lessened by the fact that the father, by a first wife, had a hydrocephalic child. In the second case, a woman who was struck, during the third month of pregnancy, by a deaf-and-dumb peddler, gave birth to a child which at the age of three was yet deaf and dumb. In the third case, a mother gave birth to a child minus three fingers of the left hand. During her pregnancy, she had been alarmed by a woodchopper falling heavily on the same three fingers of the left hand of another child. In the fourth case, one son resembled physically, mentally, and personally a maternal uncle, while a second resembled the maternal grandmother. In each instance, the relative in question had been a source of anxiety during the respective pregnancy.

Dr. Parvin, in the second edition of his work on Obstetrics, also gives four cases of maternal impressions. To arrive at some definite conclusions upon this subject, it is recommended that the following points be inquired into: The period in pregnancy at which the impression was made; the character of the impression; the channels through which the impression was received; if the mother was conscious of the impression and anticipated a defect in the child; the duration of the impression; the influence of heredity.

The practical deductions to be drawn from this subject, independently of its explanation, are that during pregnancy a woman should lead a life of tranquility, avoiding excitement, relieved of anxiety, spared depressing emotions, and provided against deprivation and want.—*Med. and Surg. Reporter*, March 7th, 1891.

Medical Legislation.

Legislatures of the different States are now in session, and doubtless some of the State legislators will have before them bills for the regulation of the practice of medicine. Usually, however, the attempt at State legislation in this direction proves a failure, and so long as it does the medical profession will remain in an inferior social and financial standing. It is well known, without stating the fact, that the profession in the United States has not the high standing professionally that is accorded the profession of England, France, Germany, and other European countries, in which much better laws are in force regulating graduation and practice.

The Dominion of Canada, just beyond our borders, may be taken as an example of rectitude in the practice of medicine. They have the best laws in the world, which are entirely under the supervision of the profession. The preliminary and medical training is a guarantee of proficiency. No man can

practice in the Dominion but one who is well qualified, which qualification must be verified independent of the teaching bodies. The fruits of this admirable system may be seen as soon as you cross beyond our borders, in the high standing of the profession, where there is but one standard, one kind, all educated gentlemen. Here we have the superior, the good, the indifferent, the inferior, and the pretender, side by side, exhibiting the same title to the world, and are therefore all placed in the same class. In the face of these facts we hear medical men talking against the enactment of laws regulating medical education!

If we had the power, we would at one blow cut the licensing power from the medical colleges, and place the preliminary and final examinations both in the hands of competent "Boards," and thus place the profession socially, scientifically, and financially, upon a plane as high as the highest.—Kansas City *Medical Record*, February, 1891.

Treatment of Patients in Vienna.—

The Vienna correspondent of the New York Medical Record observes:

Probably one of the earliest impressions made upon an American at Vienna is the indifference, carelessness, and even cruelty with which patients are often treated, and this is true of Germany, as well as Austria. One sees painful operations done without anæsthesia, when the operator is pressed for time; he sees patients stripped, and then covered simply with towels wet in antiseptic solutions, and exposed to deadly chill during long operations in cold amphitheaters—the patient being often required to leave the room afterwards wet and naked. He sees women submit to vaginal examinations by a class of nine or ten students, her expressions of suffering being often repressed with great roughness; he sees pregnant women, and women already in labor, chloroformed, and measured, palpated, and examined, inside and out, by classes similarly large, the narcosis terminating with the curiosity of the students. It is often a cause of wonder that so many patients live to establish the reputation of German and Austrian operators, and the question often arises, among the American spectators, whether hospital patients here are not tougher than with us. There is also often a lack of delicacy, not to say decency, in the conduct of hospital work. For instance, it takes the stranger from abroad quite aback to see the male patients of the skin and venereal clinics, ushered entirely naked into the presence of the professor by a woman; and dressings and applications, even urethral injections, made by the same unblushing female. But these matters soon lose their early novelty, or are swallowed up in the interest which the great opportunities for observation excite.

Sexual Ethics.—

The sexual relation is a natural want produced through the necessity of self-preservation. The human soul yearns to live; it yearns to grow and to multiply. In the face of death it longs for immortality, but immortality is not granted to the individual, and, in order to become immortal, an individual must grow beyond the limits of individuality. The natural consequence of these conditions is that immortality can spring from love only. Immortality must be gained by sacrifice, it must be taken by conquest, and there is but one power that can gain immortality. It is that power of which the Song of Songs says, "it is stronger than death." That one power is the holiness of the sexual relation; it is matrimonial love.

If we deprive sex-relation of its sanctity, it sinks down far below the most brutish acts of lowest animal life. Human sex-relation, in which the spiritual elements of love and an exchange of soul are lacking, degrades man and more so woman; it deprives them of their sanctity, and sullies the holiest emotions they are capable of—the longing for immortal life. Animal sex relations are at least natural. Animals yield to their natural wants without any consciousness of their importance or consequences. In the absence of thought, it is nature that acts in them. Immoral men and women, who prostitute the holiest sentiments because they imagine they find a pleasure in so doing, cease to remain natural, and accustom themselves artificially to unnatural wants which weaken their bodies and poison their souls.—*The Open Court.*

The New Gospel.—

Just as headache does not necessarily mean brain disease, so ovary-ache does not

necessarily mean ovarian disease. Yet time and again—and I say this deliberately—ladies have been sent to my private hospital to have their ovaries taken out, when the whole mischief had started from some mental worry. Their ovaries were sound, but their nerves were not, and no operation was needed for their cure. So misleading, indeed, are the symptoms of a jaded brain or of other nerve-strain, under the uterine livery in which they are often clad, that I have recently known a jilted maiden to be treated by a cup-and-stem pessary, and a bereaved mother to be douched and tamponned and cauterized for a twelvemonth. Such cases, even when accompanied by actual uterine diseases, are not bettered by merely local treatment. Nor are medicines by themselves of much avail. What they need is massage, perhaps electricity, and that freedom from care which strict seclusion gives. Hope should be infused into every case, and, above all, there must be imported into it the personality of the physician. It was not the staff of the prophet that awakened the dead child; but death was quicked into life when the prophet threw himself upon its body and breathed into it of his own intense vitality.

As the outcome of much that I have learned to unlearn, I have arrived at this very short gynæcological creed: I believe that the physician who recognizes the complexity of woman's nervous organization and appreciates its tyranny, will touch her well-being at more points, and with a keener perception of its wants.—Dr. Wm. Goodell, in *Health Record*, February, 1891.

A Plea For Manual Training.—

In enumerating the needs of the medical student a strong plea for manual training was lately made by one of the foremost of England's surgeons in the following words:

While the student is attending to this most important part of his training, he ought at the same time—and now I am speaking for those who have to follow the craft of surgery—to be taught how to use his hands. I should set him so many hours in the week into the shop of the village carpenter; and I should have him trained to use a saw, a chisel, a plane, and a screw, so that he should be able to make a long splint, if need be, as well as to put it on. And into the blacksmith's shop he should also go, till he knows how to strike properly with a hammer. Some of you may think that this is unnecessary; but if you could look with a workman's eye (as I can do, as I served my time at the lathe, the bench, and the forge) at a Fellow of the College of Surgeons—I won't give his name, but you will find him in almost every large hospital in the kingdom—who used a saw for the first time in his life in the amputation of a human leg, and see, as I can, what a horrible mess he makes of his work, you will agree with me that a training in practical mechanics is just as necessary (I say it is far more necessary) for a man who has to operate upon his fellow beings, as is a training in anatomy.—*The Sanitary Inspector*, Dec. 1890.

None but Bona Fide Diplomas Recognized.

The Illinois State Board of Health has decided that hereafter it will recognize no foreign diploma that does not confer upon its holder the right to practice medicine in the country in which it was granted. The holder of an Austrian, a German, Russian, or Swiss diploma, wishing to practice in Illinois, must hereafter pass an examination before the Board, unless he has a pass certificate from a Government examining commission. The holder of a Canadian diploma, unless a licentiate of the Colleges of Physicians and Surgeons of Ontario or Quebec, must pass an examination in order to be licensed in Illinois.

Medical Books.—

In 1889 about 133 new medical and surgical works emanated from the press, and 49 new editions of old or standard works. In 1890 the number ran up to 143 new works, and there were 50 new editions. On the other hand, theological, fictional, and historical literature, show a marked decrease in the number of new volumes published.

Hay Fever:—

Hay fever, said the Moderator, at the Influenza Convention, "may be likened to a tie vote." "Hear, hear!" cried the audience. "The eyes and nose both appear to have it."—*Chemist and Druggist.*

Professor Tyndall—

Dr. Tyndall has just recovered from an attack of insomnia, associated with phlebitis.

Therapeutic Brevities.

Inoculation by Mosquitoes Against Yellow Fever.—Drs. Finlay and Delgado of Havana, (Revista de Ciencias Médicas,) have published some statistics of their practice of inoculating persons newly arrived in Cuba against yellow fever, by means of mosquitoes, which have been caused to contaminate themselves by stinging a yellow fever patient. These observations have been carried on for the last ten years, and, in addition to a certain number, which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and twenty-sixth day, after inoculation, a mild attack of yellow fever, with or without albuminuria; twelve experienced no symptoms of yellow fever, either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by albuminuria altogether, or with only a very transient appearance of it; three who had had no symptoms within twenty-five days contracted well-marked yellow fever within three years; one patient who had a mild attack in consequence of inoculation, contracted a severe attack later on, which proved fatal: That is to say; of those who had been inoculated only about eight per cent. contracted the disease in a well-marked form, with a mortality of under two per cent. In order to enable us to appreciate the significance of these figures, the authors mention that they observed sixty-five monks who from time to time arrived in Havana, where they all lived under similar conditions. Thirty-three of these were inoculated, and thirty-two were not. Only two of the inoculated contracted well-marked attacks, which, however, did not prove fatal; whereas eleven of those who had not been inoculated were severely attacked, no less than five dying. It is remarked that inoculations performed in cold weather are not entirely trustworthy, and that they should be followed by a repetition in the spring.—*Boston Med. and Surg. Jour.*

Fissured Nipple and Engorged Mammary Gland.—In the treatment of fissured nipple, when the cracks are at all extensive, the ordinary remedies recommended from time to time have been found more or less unsatisfactory. Painting with tincture of benzoin, for instance, while an excellent procedure for superficial cracks, is perfectly worthless in more advanced cases. The writer finds excellent results can be secured in bad cases by the application of an ointment made up of equal parts of castor oil and subnitrate of bismuth. This mixture makes a very smooth, soft ointment, which relieves pain, and is an excellent protective to the part. Before application, the nipple and surrounding skin should be carefully cleansed and disinfected, and then the ointment smeared on plentifully. If it is necessary for the child to nurse from the affected nipple, it can be allowed to do so without the necessity of removing the ointment from the nipple, as must be done if tannic acid or the salts of lead are used. This is a serious disadvantage of many forms of treatment recommended for fissured nipple, for the irritation of removing the substance employed as a local sedative, neutralizes its action.

For the engorgement and pain in the mammary gland itself, which so often accompanies fissured nipple, excellent results are had from the use of an application of lead water and laudanum, which is applied by means of a cloth covering the whole breast, renewed at frequent intervals, and kept in place by a suitable mammary binder; this not only retains the dressing, but supports the breast and exercises even pressure upon it. With this treatment the development of mammary abscess is a rare event. If the child can be nursed from the other breast alone, it is safer to draw the milk from the affected gland by means of a breast-pump until the cure is almost complete. If it is necessary that the child should nurse from the cracked nipple, a glass nipple shield with a rubber tip must be employed.—Barton Cooke Hirst, M. D., in *Univ. Med. Magazine.*

Saw Palmetto in Prostatic Disease.—I have been afflicted with that most distressing of old men's troubles, enlarged prostate, for four or five years, and for three years previous was obliged to use a catheter from two to six times in twenty-four hours. A year ago last July I had a short respite of a month or so, and thought I had succeeded in overcoming the difficulty, but it was only partial and temporary, and I had to resort to the catheter again. I had been using rectal suppositories of ergotin, iodoform and belladonna, various internal remedies —staphisagria, carbonate of lithia, etc.—and locally cocaine ointment etc., applied to the catheter. In March last I commenced using the saw palmetto, when I began to

improve and, by the first of May was so much better that I omitted the use of the catheter, and have not used it since until about the first of this month—over six months respite—the longest in over four years.

I was so well that I became negligent in the use of the remedies, and so suffered myself to become constipated and lithemic, causing cystic irritation and spasm at the neck of the bladder, requiring the catheter a few times.

A few doses of cascara sagrada for the bowels, carbonate of lithia and pichi for acid urine and irritation of the bladder, and resumption of the saw palmetto for the prostate gland, soon corrected all the unpleasant symptoms, and now all is right again. I find it necessary to keep the bowels regular as possible to avoid pressure from gas or impacted fæces on the gland and neck of the bladder, also to be somewhat careful of diet, to prevent lithemic symptoms. Although the cystic trouble was relieved by the former remedies, I am satisfied that the gland remained congested and inflamed till I began the use of the saw palmetto and since then has materially lessened in size and is relieved of its tenderness and inflammation.—H. Knapp, M. D., in *Med. World.*

Jequirity in Granulated Lids.—I use from four to six beans to the ounce of water, and allow it to stand twenty-four hours, then filter. Of this solution I instill one or two drops into the eyes twice a day. The second day there is usually severe irritation of the ocular and palpebral conjunctiva. Acute inflammation follows in a day or two; the lids become œdematous, and there is a serous secretion. After the third day there is considerable suppuration. I keep up this effect usually for about a week. The suppuration then gradually decreases. I then employ sulphate of zinc (five grains to one ounce of water), one or two drops in the eyes three times a day Also bathe the closed lids in hot water several times a day. The patient begins to feel improved up to the fifteenth day, when he is finally free from inflammation; the granulations are gone, and the cornea gradually clears. If I find the granulations have not all disappeared, I begin the jequirity again, exciting a milder degree of inflammation than before. It requires some experience to know just how far to carry the inflammation to insure success. I use the treatment in all cases of chronic granulation, but would advise the inexperienced to try it on his worst cases first—cases complicated with pannus—as there is less danger of doing harm in such cases.—Dr. L O'Neal, in *Medical World.*

Treatment of Phthisis by the Brown-Sequard Solution.—We need not describe the properties of the testicular liquid, recommended by M. Brown-Sequard, and the therapeutic applications to which it has given rise. A Russian physician, Dr. Uspenski, has hit upon the idea of employing injections thereof for patients suffering from pulmonary tuberculosis, and purports to have received favorable results in 18 cases.

In chronic tuberculosis, two to four injections produced a remarkable general improvement, suppressing the sweats and the accesses of fever.

He regards it as a powerful tonic for all phthisic patients without exception, no matter what their condition. The bacilli, without altogether disappearing, diminish as the pulmonary lesions give way, and the expectorations become less frequent.

This treatment does not kill the micro organisms, but, according to the author enfeebles their injurious action.—*Annuaire de Therapeutique.*

Application for Toothache.—Bardet is said to recommend the following prescription for application to cavities in painful teeth:

℞ Iodoform, ½ grain.
Oil of peppermint, 5 drops.
Oil of bitter orange, 1 drop.
Oil of lemon, 2 drops.
Tincture of benzoin, 1 drop.

Or, the following may be employed:

℞ Chloroform, 2 drachms.
Naphthalin, 10 grains.

To be applied to the cavity on a small piece of cotton.

—*Medical News*, Feb. 21st, 1891.

Cradin—a New Peptic Ferment.—From the leaves and stems of *Ficus carica* is obtained by incision, a white juice which has a peculiar odor and is only partially soluble in water. The residue, remaining after filtration is soluble in dilute acids or alkalies, and from this solution U. Muzzi (Giorn. di Chimica Farmacia, Nov., 1890) has extracted a ferment which he designates as cradin. This ferment acts in the presence of hydrochloric acid and alkaline solutions, and its action is much more energetic than that of pepsin. Peptones can be demonstrated by the ordinary reactions, in albuminous fluids to which the ferment has been added.—*Wien. Medi. Wochenschr.*

Medical Progress.

Treatment of the Morphine Habit.—Dr. Gitterman (Deutsch. Med. Ztg.) gives the results of his treatment of morphine eaters, by what he calls the short method, which consists of the use of hypodermic injections with a strict confinement of the patient until cured. The treatment usually lasts a month, and ends in a complete cure, after the same remedies have been tried in vain by others. The remedies used are cocaine, codeine, and opium, with daily baths. Quite an increase in weight takes place. In order that the method of Dr. Gitterman may be more fully understood, we give the report of a few cases in full.

Case I.—Dr. T., practicing physician, aged 40, married, father of two healthy children aged 5 and 1 year, family history good, lives well, good paying practice, home life most agreeable. During his student days the patient often gave hypodermic injections of morphine, and gave himself an injection to lessen the effects of heat one warm summer day. Since then he has been a morphine taker.

During the last ten years different methods of cure have been tried with only slight improvement, but no permanent cure was made; practice increased. Greatest amount of morphine taken per day was 2. grammes. During the last year he took 1.5 grammes of cocaine daily, in order to cure himself of the habit. Since then he has been emaciated, with constipation, sleeplessness and impotency. He suffered in mind and body so much that he could not attend to his practice. The patient was treated with codeine for three months, but with no improvement in his condition, and he placed himself under my care October 21st. 1889.

Condition at that time.—Large, strongly built, but much emaciated. Sensations seemed strong. Pupils much dilated; face flushed—due to a cocaine injection which had been made previous to the examination. Heart's action accelerated, internal organs still healthy. Traces of albumen in urine. On the skin over whole body numerous scars, and three fresh abscesses. Patient lately has taken 0.3 gramme of cocaine daily, and an unknown quantity of morphine, sometimes more than 0.5 gramme.

Treatment was begun October 23d. Patient was given four injections of 0.05 gramme morphine each injection, no cocaine, in evening tepid bath at 25° C. of 5 minutes duration followed by a shower bath of 15° C.

October 24th. Patient passed a restless night, mostly confined to his room, walks a little, tries to keep free from annoyances. In daytime complains of feeling cold, and of sneezing. Has a longing for cocaine which is not gratified, appetite good, feels faint, relishes milk, and takes four times a day, a glass of Hungarian wine with an egg. Towards evening becomes feverish, delirious, strong desire for cocaine. After a warm bath followed by a shower bath he feels better. Bowels constipated. Was given 0.03 gramme morphine four times during the day, but no cocaine.

October 25th. No sleep during the night, bowels moved towards morning. Slight appetite, complains of faintness, strong craving for alcohol, which he has asked for. Patient relished a plate of soup at noon and at night, with a glass of milk and cognac every 2 hours. Ordered: Sponge bath of 15° C. in morning; evening warm bath followed by shower bath; 3 doses of 0.02 gramme morphine. Afternoon had 3 thin passages, towards evening had some fever, but was in much better condition.

October 26th. Three doses of 0.015 gramme morphine.

October 27th. Three doses of 0.01 gramme morphine. Condition same as October 25th, but without frightful apparitions.

October 28th. 0.015 gramme morphine given only in evening. Patient had 4 thin passages and vomited 3 times.

October 29th. Slept two hours. During day had 4 thin passages and vomited 3 times. Appetite much better, craves for wine. Evening, given 0.01 gramme morphine.

October 30th. No sleep during the night, and no apparitions. In day time more appetite, but some fever, feels better after two warm baths followed by shower bath. Toward evening feels very hungry. Patient relished beefsteak. At half-past eleven at night had asthmatic attack, afterwards given 0.02 gramme morphine.

October 31st. Had four hours sound sleep after the injection. Taste and smell much perverted. Patient has remained in bed since October 30th, feels much better. No diarrhœa. Appetite continuous.

November 1st. Slept well 3 hours; was restless towards morning. Patient left his bed and without permission took a long walk, accompanied by a servant; was very restless, exhausted, and toward morning delirious. Ordered two warm baths, and in evening extract opium 0.2 gramme.

November 2d. Restless night, no sleep; toward morning was hungry. Appetite in-

creased during the day. Complained of drawing-up sensations in the legs. Patient left his bed. In easy frame of mind. Vomiting has not returned; has daily from 3 to 4 thin passages from the bowels.

November 3d. Did not sleep last night, towards morning strong craving, boring pains in stomach, vomited 3 times, 5 thin passages, appetite tolerably good, great rest of mind. Patient took a short walk, and received at three different times 0.1 gramme ext. opium. In evening after the bath feels much refreshed.

November 4th. Slept six hours. Three dark passages during the day. Subjective symptoms good.

November 10th. Patient doing very well, good frame of mind, good appetite, sleeps at night without quieting medicaments. Is in very good condition, but still has 3–4 dark passages during the day. Ordered: Sitz bath 20°C. of 15 minutes duration, afternoon light bath 22°C. of 3 minutes duration followed by shower bath; for the diarrhœa massage over the abdomen.

December 18th. Diarrhœa has now disappeared for 3 weeks. Condition very good. Gained 29 pounds during the treatment.

Patient remains in a very good condition; has not returned to his old habit.

Case II.—Dr. M., practicing physician, 28 years old, married; mother very nervous; father and sisters healthy. Contracted the habit while suffering from headache during the State examinations. Took morphine during a period of four weeks, later resorted to hypodermic injections. Reformed for 1½ years. For the past 3½ years has been a cocaine-taker. For six months the patient substituted codeine for morphine and cocaine, but afterwards returned to morphine, and took 0.3 gramme, and 0.1 gramme cocaine, per day, until he came under my care, January 12th.

Condition at that time.—Small, strongly built but emaciated, pale face, very restless, nervous and irritable; weight, 122 pounds. Suffers from heart trouble, which is not constant. Lung borders moderately distended. Skin, especially of extremities, covered with numerous scars, of abscesses. Internal organs healthy.

Treatment was begun January 13th. Patient received 0.1 gramme morphine, divided into four parts. Evening, had an almost irresistible craving for cocaine, but his wish was not granted.

January 14th. Passed a restless night, but without fretfulness. During the day complained of pains in the abdomen; little appetite; craving for alcohol. Toward evening, strong desire for cocaine; not granted. Ordered before and after noon, a bath of 28° C of ten minutes' duration, followed by sponge bath of 15° C.; 0.01 gramme morphine was given four times. Light, easily digestible food; milk with cognac; Rhine-wine.

January 15th. Slept better at night. Towards morning, cramping pains in the abdomen. Normal passage of the bowels. Craving for cocaine still continues. Morphine 0.02 gramme four times a day.

January 16th. Passed a restless night. Pains in abdomen during the day. Morphine, 0.02 gramme three times.

January 17th to 23d. No change. Patient constantly watched. Took a little walk accompanied by an attendant. Slight appetite. Bowels constipated. Pains about the same. Strong desire for alcohol; no vomiting. Three injections of 0.01 gramme of morphine were given.

January 24th. No morphine during the day. Find him slightly better. Cramps lasting two hours at night, after which 0.015 gramme morphine was given, followed by five hours' sleep.

January 25th. Passed the day comfortably; three thin passages. Gave 0.005 gramme morphine at 7 P.M.

January 26th. Had four hours' sleep; became somewhat worse in the morning; talkative and angry. Light bath, 22° C. lasting three minutes, followed by shower bath. In afternoon cried without cause. Patient quite reasonable; said he tried to use will power to stop crying, but could not. Appetite poor. Craving for alcohol.

January 27th. Bad night, restless day; three thin passages. Stronger towards morning. Had an attack of mania; stormed, seized the attendant, and was violent toward his physician. Ordered light bath, followed by shower bath. Extract opium, 0.2 gramme.

January 28th. Restful night, but no sleep. Pains in abdomen during the day; vomited three times; nine or ten thin passages. Mental condition normal. Ordered 0.1 gramme opium to be given him three times. Patient remains in bed.

January 29th. Slept four hours last night. Five passages during the day; no vomiting. Appetite improved. Patient got up after dinner and took a short walk. Given twice, 0.1 gramme ext. opium.

February 1st. Find him very contented to-day. Return of feeling of dread of longer abstaining. Heavy passages with tenesmus; vomiting; no appetite; mental condition bad. Vexed toward evening because he does not get enough opium. Given three times, 0.1 gramme ext. opium.

February 2d. Night; still restless. Mental condition during the day better. Appetite improved. No passage.

February 18th. Patient now quite well; sleeps well; good appetite; bowels normal; mental condition hopeful. Weighs 141 pounds.

He remained the same, and up to this time has had no return of the cocaine habit.

Case III.—K., an officer, 51 years of age, unmarried. Mother very nervous, apoplectic; one sister 45 years old a sufferer from heart disease; brother of same age died of lung trouble. Patient had lung trouble at age of 20 years; recovered; since that has had rheumatism of the joints; three years ago had an attack which lasted three months. Had first injection of morphine in 1860, but did not form the habit then. During his last illness in hospital, 0.005 gramme morphine was injected subcutaneously. While seeking treatment at Teplitz he again had pains, and received from his physician a solution of morphine, 0.3 gramme in 15. grammes, repeating the prescription. After that he took two hypodermic injections per day; after a year, one-half of the whole solution in a day; and after that, the full prescription in a day! During the latter time he was emaciated, had loss of sleep, unhealthy in mind and body.

February 3d, was taken to a retreat to be cured. Here for four weeks he received no morphine, codeine being substituted, giving him 20 to 25 injections daily! Patient was slightly relieved. During this time the codeine habit took the place of the morphine habit. This heroic treatment did not improve the condition. April 14th he left the retreat, and took morphine again that same day. He came under my care April 16th, and was then taking 0.15 gramme of morphine per day.

Condition of the Patient.—Small, pale, much emaciated. Weighs 107 pounds. Wrinkled. Pupils unequal. Whole body covered with numerous scars. Over the thighs were fresh abscesses. Chest flattened; on right side, moist and faint rattling râles. Heart border slightly enlarged, heart action very weak and irregular—no murmurs. Patient complains of a constant painful feeling in region of heart. Bad cough with little expectoration, in which no bacilli were found.

On account of the feeble condition of the lungs and heart, causing an emaciated condition of the body, the cure was longer.

April 17th-18th. Patient received 0.03 grammes morphine four times a day. Morning, sponge-bath, 18° C.; afternoon, light bath, 24° C., for three minutes, ending with cold shower-bath. Possibly stronger. Nutritious food. Went out into the air without moving around very much, had company with him. Very strong and uncontrolable desire for the injection continuing up to the time of receiving it.

April 19th-20th. 0.1 gramme morphine taken in four doses. Appetite better. Changing visions before the mind. Sleeps badly.

April 21st-25th. 0.015 gramme morphine given three times per day.

April 26th-30th. Took daily 0.05 gramme morphine.

May 1st-3d. 0.04 gramme morphine per day. Appetite slightly improved. Weighs 111 pounds—a gain of 4 pounds. Scarcely any sleep. Complains much.

May 4th-10th. 0.03 gramme morphine per day. Restlessness great. Complains of pains about the heart. Great desire for the injection.

May 11th-14th. 0.03 gramme per day of morphine.

May 15th. Received only in the evening 0.01 gramme morphine. Pains about the heart.

No morphine was given after May 15th although the desire for it was at first very great. But slowly the uneasiness of body and mind decreased, the patient was able to sleep a little, the appetite slowly returned, and by July 1st he was discharged cured. His weight had increased to 122 pounds, a gain of 15 pounds. As far as is known, he has not returned to his former habit.

Case IV.—Merchant; æt. 57 years. Nervous parentage. Brother hypochondriacal. Suffered for 15 years from pains in the stomach, from distention of that organ. The condition was improved by regulating the diet and washing out the stomach, but he still was troubled with pains accompanied with diarrhœa, which was relieved by morphine injections. Since that time he has been a morphine eater. Six years ago a cure was attempted through the use of opium. He gave up morphine, but became an opium drinker, and carried his bottle with him constantly. The patient took 0.1 gramme powd. opium five different times during the day, and craved for more! During the first five years he did not suffer very much, but has been worse during the last year, suffering from general weakness, loss of appetite, constipation, and restless disposition. Still potent. Different means of treatment were tried without relief; the constipation continues. August 12th, 1889, he came under my care.

Condition of the Patient.—Medium sized, thin, very pale, slightly wrinkled. Pupils contracted; respond very slowly. Coated

tongue. Fœtid breath. Organs of chest healthy. Peristaltic action suspended. Descending colon greatly enlarged, which was not painful on palpation. Stomach still distended.

Treatment was begun August 13th. Patient received, the first three days, 0.3 gramme opium per day. Bowels moved after massage over the abdomen.

August 16th. Received two doses of 0.05 gramme opium each. No desire for food. Probably a little stronger.

August 17th. No sleep. Restless during the day. Three thin passages. Vomited five times. No appetite. The patient has taken a small quantity of nourishment every two hours. Ordered good red wine, mixed with opium, 0.2 gramme in 200, giving a tablespoonful every two hours.

August 18th. No sleep at night. Four thin passages. Vomited twice. Craves for alcohol; was given red wine. Craves for opium.

From this time the opium was gradually reduced, and after August 22d, no more was given. He continued to improve, and was discharged cured September 12th. Up to the present time has had no return of the habit.

Other cases are under treatment at the present time, and hopes are entertained of complete cures. Cases I and II are complicated with the cocaine habit, while Case III is rendered more severe on account of the complicating lung trouble. Patients with chronic diseases of the heart or the lungs, are more difficult to cure, and the treatment is of longer duration than others. The cure may be completed in four weeks if no complications are present. The patient receives his bath during the day-time, and must submit to it whether he wishes or not, after which light garments are put on, and the morphine injection given. The patient is constantly confined and watched, and is assured that a complete cure will be made in his case. In old and confirmed morphine-takers the dose of the narcotic is higher than in those of short duration. When several injections are given, they are at regular hours, as at 7 A. M., 12 noon, 5 P. M., and 10 P. M. Exercise in the fresh air is of great importance. Great stress is to be laid on encouraging the use of food, wine, and beer, for improving the bodily condition. After receiving the injection, the patient must remain in bed as long as illusions remain. When the longing for morphine is particularly great, opium, in the form of the extract, is the best remedy to use, and is usually given in red wine. The patient is never allowed to use the remedy himself. Profuse diarrhœa with painful tenesmus is the most troublesome complaint from which the patient suffers. Electricity and massage, which have been used at various times for the treatment of neuralgic pains, are not used for the relief of pain in morphine-eaters by me. I prefer opium or morphine in small doses for this condition. The collapse, which is so dangerous a complication of the long method of curing the morphine habit, has been observed in but one case since the adoption of the short method by me; that of a woman who scorned being watched, and was allowed to go and come as she pleased for 14 days. The tendency to collapse is prevented by the administration of alcohol. Vomiting is from the first a troublesome symptom. In cases where it persists, the morphine is given by the mouth instead of by injections, sometimes by cognac and Seltzer-water. Warm baths are given, followed by a colder shower bath. The patient usually is placed in a bath of the same temperature as the body. Where the blood is thin, one at 27°–29° R., or even warmer, is better. Where a light bath is taken for three minutes, the temperature is 18°–22° R, and where a longer one is used, the water should be warmer, from 24° to 26° R. The after-treatment is of very great importance. The patient should remain constantly under the physician's care until all craving for the narcotic has passed away. Many patients fall back into their old habits, because they are allowed to return home too early, or before the nervous system is in a healthy condition. I deem it very important that the patient should long remain under the physician's observation after convalescence has taken place, especially where loss of sleep still exists. I seldom use anything for sleeplessness, depending more on hydro-therapy for the relief of this symptom. Sleeplessness usually does not last longer than six weeks.

HAMAMELIS AND ALCOHOL IN THE TREATMENT OF NASAL POLYPI.—Dr. E. Harrison Griffith recommends spraying the nose night and morning with witch hazel or with acohol, at first diluted and gradually increased to full strength, for at least one year after thorough removal of the polypi with the wire snare. He reports a number of illustrative instances, in one of which he removed fully three hundred polypi at various sittings, and in another more than one hundred in the course of a week. Caustics and cautery after extirpation he finds to be almost invariably followed by renewed growths.—*N. Y. Med. Times*, March, 1891.

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Original Articles.

NATURE AND TREATMENT OF DIPHTHERIA.

BY DR H. A. SEVESTRE.*

The researches of Roux and Yersin have established the fact that the bacillus of Klebs is very exceptionally found in the blood and viscera of diphtheritic patients, but always exists in the false membrane, where it is associated with a certain number of other micro-organisms. We ought, then, before all, to determine what is the mode of action of this bacillus, and what part in the production of the disease belongs to the microbes associated with it.

Physiological experimentation evidences the diphtheritic bacillus secretes a poison; at least such is the conclusion of Klebs, of Loëffler, Roux and Yersin.

If we filter through porcelain a culture of this bacillus, all the microbes are retained on the filter, and the liquid that passes through, injected in animals, does not produce false membrane, but determines symptoms of poisoning that vary according to the dose and age of the culture.

Thirty-five c. c. of liquid obtained from a culture of seven days, injected into the peritoneal cavity of a Guinea pig, or the veins of a hare, kills these animals in five or six days; and the poisoning is characterized by progressive enfeeblement, panting, irregular respiration, often by bloody urine on autopsy the inguinal and axillary glands are found congested, the blood vessels dilated, especially those of the kidneys and suprarenal capsules), an effusion into the pleura, etc. If the poisoning is less profound and acute, the animals may survive, and then present certain paralyses, succumbing later. When the dose injected is very small, no appreciable symptoms may be produced; but on the other hand, if the liquid is the product of older cultures, in which the poison is more abundant, the effects are more rapid, and the animals may succumb at the end of several hours after having presented the same series of phenomena, including also, a profuse diarrhœa.

The injection in animals of a culture liquid deprived of bacilli by filtration, produces accidents comparable to those of toxic diphtheria, and in consequence, we are warranted in affirming the accidents observed in man, in cases of toxic diphtheria, are due to a poison elaborated by the bacillus. But this idea, however important, is insufficient to explain all the phenomena observed, and if we wish to penetrate more deeply into the pathological physiology of diphtheria, we take account also of the effects which may be produced by the micro-organisms associated with the bacillus of Klebs. Of these, staphylococcus pyogenes, s. albus, s. aureus and streptococcus pyogenes are particularly active. Roux, Yersin, Kolisko, and Paltan, have seen them in the false membrane; then microbes have been found in the pus of abscesses which sometimes complicate the angina. At autopsies, too, they have been detected in the glands, kidneys and lungs; these facts explain certain cases otherwise difficult to understand. Dr. Locquin, having been bitten by a child ill with diphtheria, had an abscess at the seat of injury. Dr. Pouquet, having pricked his finger during a tracheotomy, had an erysipelas accompanied by grave general accidents, and gave erysipelas of the face to the physician who attended him. It seems quite natural, then, to attribute these accidents to microbes contained in the false membranes; but apart from such cases, which are a little unusual, the data above given have a wider bearing.

It seems now proved, that the bronchopneumonia of diphtheria, is not a direct consequence of the disease, but results from a secondary infection; the same interpretation is applicable to such abscesses as I have just

*Of Hospital Trousseau.

alluded to, and to a good part of the complications of diphtheria. We have, then, not only to combat one microbe, the bacillus of Klebs, but, a whole series of pathogenic germs, which by dint of the epithelial denudation produced by the angina, penetrate the organism; we must even add that for certain of these the invasion is the more easy from the fact they exist normally in the mouth, and only wait a propitious occasion to infect the organism. Others, on the contrary, come from without, as does the bacillus of Klebs.

We see by this summary, the interest bacteriological researches present for the study of diphtheria; we must, however, be on guard against exaggerating their importance. Many bacteriologists yet hesitate to admit that Kleb's bacillus is characteristic and pathogenic; and on the other hand, it is certain that clinical observations do not always precisely agree with the inductions of experimentation; there is, at least, ground for making certain reservations. We are told, for instance, that in an animal under experimentation, it is necessary there should be a previous lesion of the mucosa in order that the false membrane may develop; now in the human subject this lesion is certainly a circumstance favorable to the contagion, but is not indispensable. Without doubt, measles, scarlet fever, simple angina, hypertrophy of the tonsils, and a lacunar state of those glands, create a predisposition to diphtheria, but we unfortunately only too frequently see the disease develop apart from any previous appreciable lesion.

The microbe theory gives a very seductive interpretation of diphtheritic infection, which, if demonstrated, would settle all disputes as to the nature of the disease. In the first period the false membrane develops; secondarily, the general infection. And as this latter derives its origin from poisons elaborated in the false membrane, diphtheria cannot be a general disease at first, of which the false membrane is a manifestation; it is a disease primarily local, and may remain so in some cases, and even if it gives rise to general symptoms, the latter are but secondary, and result from the absorption of soluble products engendered in the false membrane.

Clinical experience presents facts these data cannot explain, such as the case related by Masterman,* of a woman who had completed her term of pregnancy, and contracted diphtheria and died; at the moment of death, version was performed, and a living child brought into the world, free from disease, though the mother had been for more than a week suffering constitutionally from the diphtheritic poison. Now the healthy placenta may, indeed, prevent the passage of micro-organisms, but how is it that it did not let the soluble poisons filter through, when, according to the theory, the death of the mother was to be attributed to the infection determined by these soluble products?

Moreover, the gravity of infection is not at all in relation with the extent of the false membrane, and cases are not rare in which patients succumb rapidly to "hypertoxic" accidents, when the false membrane is insignificant in amount and extent. So then there still remain many obscure points in the history of diphtheria.

We believe, then, diphtheria is a microbic disease produced by the bacillus of Klebs, with the concurrence and coöperation in many cases of micro-organisms. We believe, further, it is a disease primarily local, and if obliged to admit certain reservations as to the intimate mechanism of the general symptoms, the latter result, in great part, from the action of soluble toxic products elaborated in the false membrane.

We readily understand the practical importance of these considerations. They enable us to settle with a certain precision the indications which should, in the treatment of diphtheria, warrant us in expecting more favorable results than have heretofore been obtained. There are few diseases for which so many remedies are proposed, but the very profusion indicates no one is truly efficacious. We are, however, able to eliminate certain modes of treatment; for example no one will ever again treat diphtheria by antiphlogistics. The positive indications may be formulated as:

To prevent—or impede—the development of the microbe, and render it inactive:

To neutralize the toxic products, and prevent their absorption:

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*British Med. Jour., Jan., 1886.

These products having been absorbed, to combat the action they may exercise in the organism:

To favor the elimination of these toxic products:

To combat secondary infections by accessory micro-organisms:

Support the organism in its struggle against the microbes and their products:

Treat the complications and the sequelæ.

In other words, the indications are: Local antisepsis: General antisepsis: General treatment: Treatment of complications.

Local antisepsis is very important, and may be realized most completely by the method of Gancher, which consists, essentially, in as complete ablation as possible of the false membranes, and cauterization of the denuded mucous surfaces by a powerful antiseptic. — The topical application employed by Gancher is phenicated camphor (Camphor, ℈j; cryst. carbolic acid, 5 grains; castor oil, 15 grains; alcohol, 10 grains; tartaric acid, 1 grain; dissolve phenic acid in alcohol; add camphor, then tartaric acid, and lastly the oil).

Ablation of false membranes is accomplished by means of a stiff camel's-hair pencil, or a simple swab of absorbent cotton; sometimes it is necessary to seize with dressing-case forceps and remove. In every case, it is indispensible to denude the mucosa as completely as possible, taking care to avoid bleeding. Now the phenicated camphor should be freely applied to the denuded surfaces. These operations of ablation and cauterization are repeated two or three times a day, or oftener if demanded by a tendency of the false membranes to reproduce. In the intervals, every two hours, wash out the mouth with a syringe that will throw a full continuous stream—using warm water and carbolic acid, one-per-cent. solution.

This is very efficacious, but it must be carried out with a great deal of rigor. The denudation of the mucous membrane would, in fact, be dangerous if it were not instantly followed by cauterization; and, further, would favor secondary infection and absorption of the diphtheritic poison. Moreover, it is very painful, even when made under cocaine, requiring no little courage on the part of the physician. It is very difficult of application, especially in the case of young children, hence, if we find we are not able to carry out this treatment, it must be abandoned for some method that, while not giving the same guaranty of success, promises some degree of efficacy. This comprehends topical applications, and full irrigations.

Topical applications are made as above described, only with less rigor. The false membrane is removed when it can be easily done, but care is taken not to excoriate the mucous membrane. Gancher's solution; glycerite of carbolic acid (5 per cent.); Legroux's solution of creasote (creasote 1 part, alcohol 10 parts, glycerin 20 parts); salicylic acid in a 2 per cent. solution; liquor ferri-perchloridi and glycerin, of each equal parts; tincture of iodine, which penetrates the false membrane more deeply than other liquids; all may be employed. Whichever is chosen, apply thoroughly, taking care to touch all the diseased parts, and make the application several times during the day. In the interval, use irrigations as above directed; gargles are never to be depended upon, especially in the case of young children.

We make the first injections, that the attendants may be instructed in the manœuvres. An assistant holds the child on the lap, and, with the hand firmly applied to the forehead, presses the head against his breast; the legs and feet are confined by a broad bandage passed around the trunk; a cork placed between the teeth; then with the child's head inclined forward so that liquids may flow freely from the mouth, the injection is thrown, first gently, then with more force, and directed especially on the parts which are most affected.

As for the irrigation, this may be a one-per-cent. solution of carbolic acid or of chloral; a saturated solution of boric acid or of naphthol; a solution of permanganate of potash or of salicylic acid (one-tenth per cent.); lime water, etc. These should be repeated every hour. Knowing the necessity thereof, we respect the hours of sleep, only taking advantage of moments when the child awakes of itself — these opportunities are sufficiently frequent in grave cases. Finally, in order better to insure local antisepsis, especially in cases where the disease tends to invade the larynx

or the bronchi, we make free use, in the apartment of the patient, of sprays of phenol, thymol, or salicylic acid; the latter has, however, the disadvantage of provoking coughing or sneezing.—In default of a suitable steam-atomizer, we evaporate these substances on the stove or over an alcohol lamp. These vaporizations are certainly very useful, both in contributing to local antisepsis, and in keeping up in the room a certain moisture favorable to the spontaneous detachment of the false membrane.

Dr. Remou, of Saumur, advises to have the sick-room constantly filled with vapor of carbolic acid; he insists enough is absorbed through the mucous membrane to have an appreciable general effect. Bergeron recommends vaporizations of hydrofluoric acid; Ozanam, inhalations of bromine; Delthil prefers vapors from a mixture of coal-tar and turpentine; Bonamy, of Nantes, speaks highly of eucalyptus.

Bleynie, of Grand-Boulogne, recommends a mode of treatment I have found particularly useful with small children: Every ten minutes a small piece of ice is put in the mouth of the patient and left to melt. Whether or not this prevents the development of microbes, it is very grateful to the little patients.

Certain medicines when introduced into the organism, are eliminated in part by the mucous membrane of the pharynx, or the respiratory passages. In these we have a precious recource, by which in a roundabout way, we may affect the production of false membranes. On this principle, is based the administration of chlorate of potash, a salt that is largely eliminated by the saliva; bromine too, has been proposed in the dose of 5 or 6 drops; and Guttman advocates pilocarpine, but Archambault's experiences therewith are far from favorable. Copaiba and cubebs have certainly more efficacy, but are likely to provoke gastro-intestinal irritation and diarrhœa. Of late, Letzerich has vaunted benzoate of sodium; and I have employed it in cases of diphtheria of the larynx and bronchi, and the results were sufficient to encourage further trial.

To produce indirect antisepsis, I have attempted subcutaneous injection of divers antiseptic products, which generally have been well supported, though the results are not very encouraging.

Besides the pharynx, we must add antisepsis of the whole digestive tract; the patient swallows incessantly, toxic products, and diarrhœa is by no means rare. This antisepsis may be obtained by calomel, naphthol, salicylate of bismuth, etc.

A prominent indication is to sustain the forces, hence, abundant food of easily assimilable kind must be given. There is nothing better than milk, and as much should be given as can be tolerated. We can vary the diet by soups, jellies, stews, or even raw meat; and we must overcome the repungence of the patient to take food; in some cases I have even resorted to the stomach tube.

Be rather chary of medicaments; quinine may be useful but it is sometimes badly tolerated. Alcohol in any form is always indicated—Malaga wine, brandy, egg-nog, etc. Then there is the standard remedy in which most physicians have faith, viz., the tincture perchloride of iron, given in 5 to 10 drops, every two hours in some eligible vehicle.

It is perhaps needless to insist upon thorough ventilation, but there must be a constant renewal of the air in the sick room. Natural sleep ought always to be favored, and at all times there should be quiet around the patient.

There are certain indications which pertain to divers localizations of the disease. In croup and bronchial diphtheria it is necessary to make almost continuous use of antiseptic evaporations. The benzoate of soda may be employed, and likewise subcutaneous injections of antiseptic substances. In croup I would advise to be exceedingly chary of emetics, and in fact of everything which may enfeeble the organism. Tracheotomy, if necessary, should be done with antiseptic precautions, and the wound frequently cleansed, and the interior of the windpipe mopped out to free it of mucosites. The antiseptic treatment is equally applicable to nasal, ocular, and cutaneous diphtheria. The methods of application and the substances employed will naturally vary according to the seat of the disease, but the same principle should always govern, viz., to make antisepsis as thorough as possible.

PARIS, France.

URETHRAL STRICTURES.*

BY THOMAS C. BIDDLE, M. D.

Stricture of the urethra presents three pathological types: *Organic*, which is the result of the contraction of the hyperplasia of urethritis: *Cicatricial*, which is caused by the cicatricial contraction of a traumatism or urethral ulceration, and: *Spasmodic*, due to a spasm of the muscular fibres that enter into the constitution of the walls; these muscular fibres are found through the entire length of the canal, but their greatest development is in the membranous and prostatic portions of urethra, consequently the spasm is the most frequent and severe in these deep portions of the organ.

Spasmodic stricture is divided into *idiopathic* and *symptomatic*. The former is reflex, and referable to disease in other organs, as the rectum, and various nervous disorders, as meningitis and hysteria. Idiopathic stricture, most frequently presents itself in the form of spasm of the sphincter of the bladder, with painful micturition and retention. Symptomatic stricture is caused by irritation of the mucous lining of the urethra, as in gonorrhœal and other urethral inflammations.

All forms of spasm should be treated by relieving the exciting cause, together with the use of tonics and antispasmodics. But most useful in the treatment will be dilatation practiced in the way that will be described in treating other forms of stricture.

Of all the varieties of stricture, organic is the most important, because of its frequency. All cases of acute urethritis are accompanied by acute infiltration of the sub-mucous tissues; in favorable cases this exudate is absorbed, and is not followed by stricture. If absorption does not occur, however, the neoplasm becomes organized into fibrous tissue, with consequent contraction. It consolidates, and consolidating it contracts; therefore, whatever prevents the rapid absorption of the phlegmasia, tends to development of organic stricture. Among these causes may be mentioned scrofula and other vitiated conditions of the system, excesses of all kinds, overwork and strong injections. The amount of the infiltration may be small, producing stricture of large calibre, or it may be more extensive causing a stricture of small calibre.

Cicatrical strictures, as I have before defined, are due to the healing of an ulcer or traumatism. When resulting from injury, they are usually situated in the membranous or bulbous portions, because the injury is most frequently confined to the perineal region.

The symptoms that would direct attention to stricture, are disturbance in the function of urination, sometimes incontinence, gleety discharges, imperfect sexual powers, and a history of gonorrhœa or injury either external or internal.

The diagnosis of stricture is most satisfactorily made with olive pointed bougies. Begin with one of a larger size, and if it will not pass, substitute a smaller one, until one is found that passes. By this means the size, length, and other characteristics of the lesion can be determined with a considerable degree of accuracy. This method of exploration should be preceded by the use of cocaine, as should all manipulations within the urethra that are attended with any degree of pain. A four per cent. solution, exhibited by means of an Otis' cocaine tube, is the most satisfactory manner of employing the agent. The tube reaches well down into the urethra, and can be attached to an ordinary hypodermatic syringe. With this, 20 to 40 ♏ of a four per cent. solution should be thrown upon the field of operation. It will be found a sufficient and satisfactory anæsthetic in all methods of treating stricture, except when the latter is very wide, or in external urethrotomy. Without efficient treatment, most strictures become more and more tight, and the functional symptoms, which they occasion, become more and more distressing, following which certain complications are liable to supervene, the more frequent of which are retention, cystitis, and urinary fever.

The prognosis of stricture, should be regarded with greater concern than is usually given it, because it exposes the patient to many local and general complications that are capable of causing death. It is also entitled to graver consideration, because of the treatment it demands—treatment which may

* Read before the Lyon County, Kansas, Medical Society, 1891.

be dangerous even in the most benign cases. It is also grave because of the unsatisfactory results of even the most skillful treatment, and an opinion on the result of any method of treatment should be carefully guarded. The result is seldom radical or final, and treatment must be continued indefinitely to prevent its return.

Many methods of treatment of stricture have been proposed. The number suggests the inefficiency of all. I will only call attention to the few that have best endured the test of time. Treatment by electricity comes to us with the endorsement of some very reliable medical men; but it does not seem to gain much in popularity, and will probably soon follow a score or more of methods, for the cure of stricture, to the grave of oblivion, after having been tried and found wanting.

Dilatation has, for many years, been the method most generally employed for the relief of urethral stricture; but since the discovery of cocaine, internal urethrotomy is being done more frequently, because with cocaine it is not necessary to expose the patient to the danger and unpleasantness of ether or chloroform anæthesia. The virtue of dilatation is based upon the law of atrophic absorption. When a foreign body is introduced into the tissues, an irritation follows, with resulting congestion of the surrounding parts. New blood vessels are developed, and relaxation and wasting supervene. This is the action of a bougie when introduced into a stricture. When a larger bougie is used, we gain the double action of inflammatory atrophy and mechanical separation of the walls of the urethra. Treatment by dilatation alone should be confined to narrow strictures of sufficient calibre to admit not less than a No. 12 American scale. In strictures of smaller calibre, or that are broad or tortuous, incision by internal urethrotomy should be substituted. In practicing dilatation of the deep urethra, the American sound is the better instrument, because the curve is made to correspond more perfectly with the normal curve of the canal, which is found to be the arc of a circle with a diameter of three and one-half inches. The introduction of the sound should be preceded by a cocaine injection. It will not only relieve the pain, but will enlarge the calibre of the stricture by the anæmia it produces in the tissues.

When internal urethrotomy is determined upon, the selection of a urethrotome is a matter of some practical importance. The Maisonneuve and the Otis instruments are in general use in this country. The latter is well adapted to strictures in the penile portion. In operations in the deep urethra, the Maisonneuve instrument has the advantage of penetrating a smaller stricture, and also being curved to correspond to the bulbous and membranous portions. It is also equal to the Otis in cutting larger or smaller, by adjusting a larger or smaller knife, according to the demands of the case to be operated upon.

The success of urethrotomy depends on cutting through the entire depth of the stricture; therefore, if the stricture is not completely severed by the first incision, the instrument should be re-adjusted and a deeper cut made. The coärctation should be divided up to a size where a No. 21 to 23 American will pass it, after which a larger sound should be carried through, in order that all undivided fibres may be torn or stretched. The hæmorrhage following internal urethrotomy is usually slight, and can be controlled by a compress placed over the seat of the stricture. After the operation the patient should be put in bed. If no complication arises to contra-indicate, a full-sized sound should be introduced every second or third day. By this means, if possible, keep the canal up to the full size of the bougie that was passed at the time of the operation. Without this after-treatment, the stricture recurs, and the operation will prove a failure. This practice of dilatation should be continued at intervals of once a week to once a month, for one year, after which the patient should be impressed with the necessity of having a bougie passed once or twice a year for the remainder of his life. Failing to faithfully carry out these instructions, he will never be free from the danger of a relapse of his stricture.

The contra-indications to after-dilatation are: Urethral fever—which is often severe and sometimes fatal, and calls for rest and antifebriles—cystitis, epididymitis, and orchitis. As soon as the complication subsides, the

treatment should be continued carefully. By observing most rigidly the details of cleanliness, these troublesome complications will arise very infrequently. In strictures that are too small to admit the urethrotome, they can usually be dilated to sufficient size. This is accomplished in two ways; *first*, the rapid method, with Banks' dilating bougie; and, *second*, the slower method, by means of gum filiform bougies that are introduced and allowed to remain twenty-four hours. When it is removed, it will be found that a larger bougie will easily take its place. This is another exhibition of the principle of atrophic inflammatory dilatation. Larger bougies can be thus employed until the urethrotome will pass, and the stricture incised. When the filiforms cannot be introduced, the patient should be placed in bed, and, if demanded, the surgeon should do supra-pubic aspiration. It will often occur that, after twenty-four hours rest, the filiform will enter. By carefully practicing these methods, it will be found the cases demanding external urethrotomy will be very infrequent.

The details of external urethrotomy will be omitted. It is an operation that should be employed only as a *dernier resort*, in cases of impermeable and complicated stricture.

Divulsion is another method that I will mention, only to remark, that it has no advantages over internal urethrotomy, but is more dangerous from the pain, contusion, and laceration it produces. Therefore I conclude, the practitioner who carefully and intelligently treats cases of urethral stricture by dilatation and internal incision (with few exceptions), will give his patients the benefit of the best treatment known to modern medicine.

EMPORIA, Kan.

THE SHURLY-GIBBES METHOD OF TREATMENT FOR PHTHISIS PULMONALIS.

BY HOMER M. THOMAS, A.M., M.D.*

A consideration of the Shurly treatment for phthisis pulmonalis, naturally places it at once in a comparative way with the Koch treatment. The widespread professional interest in the Koch cure for consumption, throughout the world, has been to quite a degree augmented in this country by the published labors and researches of Drs. Shurly and Gibbes, and of their method of treatment for pulmonary tuberculosis. In common with the whole professional world, I hailed with delight the discovery of Professor Koch, and made strenuous efforts to early receive some of his "lymph." At last, through the courtesy of a professional friend, I was successful; and when the vial containing the precious fluid was placed in my hand, I felt myself the possessor of a great remedial agent, which I at once began to consider the advisability of using upon two tuberculous patients. The more I thought of the matter, however, the less confidence I had in its remedial virtues; this feeling being based upon the fact the "lymph" was an animal product, and to use it hypodermatically seemed to me exposing my patients to great risk. Finally I placed my supply of the "lymph" in the hands of professional friends, and suggested two cases upon which they might use it; one a case of tubercular cervical glands of the left side of the neck, another a case of tubercular phthisis of the right lung, extending as far as the second intercostal space, in which extensive caseation had occurred.

The injection of two millimetres of the properly diluted "lymph," in the latter case, produced most severe and surprising constitutional reactions. These were: A temperature of from 102–4°; pulse rate increased from 80 to 130, and; severe frontal and parietal headaches, with nausea, vomiting, and almost a condition of collapse. Such was my personal observation of one case in which the "lymph" was tried. About this time I became more familiar with the treatment of Dr. Shurly, and made a visit to Detroit for the purpose of personally investigating his methods. A short time spent in Harper Hospital, where unusual facilities were afforded for a personal inspection of patients undergoing treatment, led me to highly esteem the methods employed.

The general plan of the Shurly treatment seems to hinge on the use of chlorine gas to stop caseation in the lungs as far as possible, and to cut off the origin of the poison

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which is circulating through the system. In the early stages of the disease, before caseation has occurred, it is not necessary to use chlorine gas freely, but the hypodermic use of iodine, for its well-known effect on chronic inflammations, is substituted.

Dr. Shurly believes in the existence of a bio-chemical change or action in the system as a cause of caseation; in common with Dr. Gibbes, he does not believe the bacilli are the *cause* of tuberculosis, but rather a concomitant factor thereof. However much we may differ in our views of the pathology of this question, as broad-minded, progressive physicians we should gladly accord assent to any treatment which is curative, or even partially so; we should be willing to admit that anything is good which does good; hence it is that, after inspection of the treatment employed by Dr. Shurly, and personal application thereof for the last three months, I feel free to say it marks a great advance in our therapeutic measures for the control of tuberculosis. One very marked and important advantage which this treatment has over the method of Koch, is its freedom from violent constitutional reactions. As far as my experience extends, it is perfectly safe, and perfectly controllable; hence, the physician is not worried or apprehensive as to possible dangers or accidents arising from its use. It appears to be based upon the value of the hypodermatic injections of iodine for their resolvent action on lymphatic tissues.

The solution of chemically pure iodine used is ten minims, equivalent to one-twelfth of a grain; this is supplemented again by the hypodermatic use of a solution of the terchloride of gold and sodium, of which five minims represents one-thirtieth of a grain. Under antiseptic precautions, no abscess should occur from the injection of either of these solutions. The only discomforts arising are those of local irritation and smarting, lasting for perhaps half an hour. Should an excessive dose of the iodine be used—say 20 or 30 minims—it would be indicated by the presence of iodism, eruptions, acute catarrhs, diarrhœa, and constitutional *malaise*. The hypodermatic use of the terchloride of gold and sodium is never complained of as regards local irritation, and it is only in very exceptional cases that a cerebral congestion arises, principally over the frontal sinuses. My experience with this treatment does not justify me in being assertive as to its value, as I have only had two cases directly under observation from which to collate the facts, however, I am free to say that under none of the old methods of treatment, with which I am familiar, would it have been possible to secure the evident benefit these cases have had.

Case 1.—Girl, aged 19, tubercular phthisis in second stage, consolidation of left lung to first intercostal space; no cavities; ill for one year; former treatment had been upon the old lines, and as thorough as could be applied, with no appreciable improvement. Before commencing the Shurly treatment, her temperature had ranged from 101°–103°. After ten days treatment the temperature ran down to 100°, and to date has not been above that. Her former condition was of severe cough, with yellowish, muco-purulent sputa; has received the typical treatment, *i. e.*, inhalations of chlorine gas, and gold and iodine injections. Has had chlorine gas inhalations for the past seven weeks, and the hypodermatic injections for the last five weeks. Her present condition is that of a lessened number of tubercular bacilli in the sputa, and cough almost absent; improvement in appetite; good digestion; no diarrhœa. Auscultation reveals still existing broncho-vesicular respiration in supra- and infra-clavicular regions; and bronchophony and dulness on percussion.

As to this case, I do not regard the condition of the lung as materially improved, yet it seems certain that the disease is no longer progressive, and apparently checked, so that it does not extend beyond the first intercostal space of the lung. This patient receives her treatment at home under fairly hygienic surroundings.

Case 2.—Mr. G. B. R., aged 23, acquired pulmonary phthisis in June, 1889, which was early detected by his attending physician. In August of 1890, he was sent to the vicinity of Manitou, Colorado, where he remained for three months without apparent benefit, and returned home much discouraged as to the outcome of his disease. He resumed treatment under the ordinary methods until November 28th, when a careful examination of the chest revealed consolidations in the right lung to the third intercostal space; the expectoration was filled with bacilli, and the patient had lost markedly in

weight and strength. I at once advised the Shurly treatment, which met with the hearty coöperation of the family, and a room was fixed in his house where he could take the complete treatment.

The room was 10 x 12 feet in size, and practically air-tight. First, this space was filled with steam vapor until the air was saturated, when a two-ounce saturated solution of chloride of sodium was vaporized (sprayed); this supplemented by the introduction of chlorine gas to the easy tolerance of the patient. The gas was manufactured from the black oxide of manganese and chloride of sodium, with the addition of 50 per cent. solution of sulphuric acid. The patient remained in this room from ten to twenty minutes, four times a day. The effect upon the respiratory tract was soothing; the gas is non-irritating, and a feeling of general comfort and relief from difficult breathing was invariably experienced after inhalations in this room. In addition to this thorough method of local antisepsis for the lungs, I have alternated the hypodermatic use of ten minims of the iodine, and five minims of the gold solution, every day. This treatment has been supplemented by the internal use of 15 minims of dilute phosphoric acid, three times a day, and also six capsules daily of morrhuol and Beechwood creasote, each containing respectively three minims and one minim. Every night the patient is placed before a hot fire, and the whole surface of the body thoroughly rubbed with pure lard. The sleeping room, and in fact all the hygienic surroundings of the home, could not be improved upon.

The improvement in this case has been surprising. Whilst I have not been able to restore the consolidated lung tissue to a healthy state, by any means, yet as far as careful physical examination goes, there is no advance or extension of the disease. This case has been seen by a number of prominent physicians, who express their pleasure as to the marked improvement in the patient. Whilst this treatment does not seem to be a specific panacea for lung troubles, in my judgment it marks a great advance in our therapeutical resources, and I think that where a case, even in the second stage of tuberbular phthisis, can be actively treated in this manner, supplemented by the best therapeutical and hygienic surroundings, it promises to be of undoubted value.

CHICAGO, ILL.

THE VALUE OF SYRUP TRIFOLIUM COMP. AS AN ALTERATIVE.

BY W. THORNTON PARKER, M. D., M. M. S. S.

The old aphorism "If you do not know what is the matter with the patient, treat him for constitutional syphilis," often receives verification; but what is most remarkable, is the great change which has taken place in the treatment of syphilitic diseases. Recall the so-called "heroic treatment" of our student days and compare with methods that now obtain! And yet the latter are equally, if not more, potent to remove the poison, and restore the health, than the former.

Of the new remedies, syrup of trifolium compound may well be termed the true *specific* for syphilis.

This is a preparation combining the alterative, tonic, detergent properties of red clover, stillingia, burdock, poke-root, *berberis aquifolium*, *cascara amarga*, prickly ash, and potassium iodide, and was first introduced to the profession in 1885 by Messrs. Parke, Davis & Co., of Detroit, as a substitute for, and superior in efficacy to, the "bamboo-brier root compound" and "alterative compound," and other preparations objectionable because of their patent and copyright character.

As would naturally be anticipated from the character of its ingredients, syrup of trifolium compound has been found by physicians to act most happily in the various and varied manifestations of scrofula, and the class of skin diseases that so often appear wholly unamenable to treatment; as well as syphillis. Further, in the latter, it forms a valuable adjuvant to other treatment, and may be combined directly with the mercurial preparation, the constitutional effect of the latter being thus readily obtained without danger of salivation. It is a well known fact that a combination of drugs often modifies their therapeutic action, so that effects can be obtained from complex formulæ, such as never follow separate administration; thus vegetable alteratives, combined with mercury and iodides, often permit the prolonged administration of the latter, and materially aid in their specific effect in cases which, if given alone, these remedies could not be borne. Hence, in early syphilis I am ac-

customed to combine corrosive sublimate with syrup of trifolium compound in the proportion of one grain of the former to eight ounces of the latter, administering a teaspoonful three times daily; and in syphilitic ulceration of fauces, I increase the sublimate to one and a half grains in *six* ounces syrup of trifolium comp., giving a teaspoonful *four* times daily, reducing the dose in bulk and frequency if toxic symptoms are developed. In buboes or suppurating glands, a very happy combination is sixteen grains of calcium sulphide, and an ounce of potassium iodide, in eight ounces of syrup of trifolium compound, giving a teaspoonful (slowly increased to a desertspoonful) thrice daily in a tumbler of water.

Dr. Stedman in Reference Handbook of the Medical Sciences, defines alteratives as a class of remedies that, "promoting nutrition, so alter the course of morbid processes as to lead to the elimination of disease, and to the return of the organism to a normal healthy condition." This change occurs without any clear evidence of drug action upon the various organs, and without notable increase in excretion from the body.

The mode of action, however, is but imperfectly understood, and we have for the time being to content ourselves with the knowledge gained empirically, that certain diseases are alleviated, or cured by the exhibition of certain remedies.

Spring is the season when alteratives are most in demand, and "spring sickness," is well known by the general practitioner. A long, cold winter, with more or less hybernation, in houses often overheated, and very commonly poorly ventilated, with clothing perhaps loaded with the accumulations of months of wear, and bedrooms foul from neglect of hygienic attention, all tend to create an abnormal condition of the body, where some reliable alterative, like syrup trifolium comp., is required to speedily set matters right.

The practitioner can in such cases accomplish a great deal for his patients, by using Nature's great and successful alteratives (fresh air and clean water), by bringing about cleanliness in the home, in the surroundings, and of the person; and then will he find this medicinal preparation all that is essential to renew health.

I have a long list of patients for whom trifolium compound accomplishes the most gratifying results. Its great value in the treatment of venereal diseases, (where it can be relied upon so unfailingly), must be considered of secondary importance.

To begin with, the physician himself, after his long winter's work, of day and night exposure, irregular habits and interrupted meals, confinement for many hours in all kinds of sick rooms, in all kinds of houses, can find in this valuable preparation exactly what he requires, an alterative worthy of his confidence. But we all know how seldom medical men concern themselves about their own health and comfort, toiling on in the noble calling they have so generously exercised for others, until forced at last to retire, "used up." We see every day, cases in which "neither health or death seem to be near at hand," but that are in need of an alterative treatment. We are not surprised to find some of these easily overcome by bronchitis, pneumonia, kidney disease, etc., where a thorough course of trifolium comp., would have, without doubt, been the means of averting the catastrophy. I have used, and am still using, it in several cases, with gratifying results, and these cases are so widely different that the suspicion of making it a "cure-all" might easily be inferred. First, it is recommended by responsible medical authority as useful in secondary and tertiary syphilis, and in these conditions I think I may assert its reputation is universally established. But for the general practitioner it may be more important to know that in phthisis pulmonalis it can exercise really important control. In diseases actually diagnosed as scrofulous, also, it is reliable and productive of excellent results. I have used it with great advantage in chronic diseases of old people, and in cases of chronic rheumatism, and in some forms of obstinate skin disease, especially those popularly known as "salt rheum."

A very common disease, and one which causes considerable distress, not only in the little patients attacked, but in the anxious parents and friends, is chronic eczema of the scalp. This is another illustration of the conquest of gentle methods over the older and harsher, still recommended by many. Chronic eczema

of the scalp is so commonly met with in practice, and the treatment recommended so unsatisfactory, that I venture to offer the following, as that which has proved universally successful in my own experience. This disease, which is so wearing upon the strength of the child affected, seems in many instances to persist, and to be aggravated by *over* treatment. Oftentimes, however, the case is deemed hopeless, the parents being assured that nothing can be done, or that in four or five years the little sufferer will have out-grown it. Several cases have been placed in my care which presented such discouraging appearances that, I confess, I felt little hope of a successful issue. In some of these the list of remedies used would surprise one. All kinds of ointments, lotions, alteratives, and tonics had been employed, without success. In very many instances, remedies are employed which arrest for a time the eruption, but as soon as they are withheld, the flame burns on as brightly as before. With some I obtained a condition so injurious to the health of the scalp, that should they be persisted in the chances for cure would be absolutely hopeless. One oftentimes finds very much to be undone, especially when the advice of non-professional friends has been followed, and not only has valuable time been lost, but the whole constitution is suffering from the severe and uncalled-for treatment. It is impossible to manage eczema of the scalp successfully without considering the constitutional treatment of the very highest importance, and here the value of the syrup of trifolium comp. will rapidly assert itself when combined with the local treatment shortly to be described.

A very general opinion seems to prevail that eczema must not be too rapidly healed, lest it "strike in." With all this popular prejudice against healing the disease too rapidly, the remedies in common use fail because they are too *harsh*. Gentleness is positively necessary in treating, not only the local symptoms, but the constitutional as well. We have first, then, to consider the constitution of the little patient. The drain upon the strength has been very great. The blood is in n impoverished state. Probably from the loathsome nature of the disease, there has been too much confinement to the house. This shutting up of such patients is also owing to a fear of their taking cold, and likewise to the fact that exposure to even gentle winds sometimes produces severe pain.

The first indications are for pure air and exposure to the sunlight, healthy sleeping-rooms, good bedding, generous, easily assimilated diet. I use with almost all my patients, the admirable nutritive products known as Mosquera's food products. Greasy articles of food must be prohibited, also pork, pies, pickles, candy, cake, etc. Regular habits and careful attention to the bowels, using for that purpose stewed prunes and figs. Should constipation exist, it should be treated with enemata, suppositories, or some mild and harmless aperient; but positively none of the more commonly employed cathartics. The daily sponge bath is to be strongly recommended.

The constitutional remedy which is most indicated is the syrup trifolium comp., with or without the syrup hæmatic hypophos. (P. D. & Co.) When I find the skin dry and harsh, I employ every night inunctions of olive oil. For the local treatment, begin by cutting the hair as short as possible, and thoroughly and gently wash the head with soft warm water and pure soap; then wash to remove any particle of soap. In this bathing, *abundance* of water must be used, and the drying process very gently and carefully accomplished by means of soft and dry towels, the same to be immediately afterwards boiled and disinfected. Next, boroglycerid ointment, 25 per cent., should be spread all over the scalp carefully, and a clean linen cloth tied over it, in the method recommended in the use of the triangular bandage, or else a cap of linen formed to completely cover the head. The bathing and application of the ointment should be done daily, and the old cap destroyed by fire when removed. This treatment, faithfully carried out, will bring about, in nearly every case, complete recovery,—and few cases of recurrence have, as yet, come to my notice.

The commoner use of trifolium comp. I have already referred to, but there are many other indications which have not been mentioned. I must, however, mention otorrhœa as one peculiarly suitable for the exhibition

of this drug. I use it in combination with syr. hæmatic hypophos. for the constitutional treatment. Locally I use a 10 per cent. boroglycerid solution at 100° F., and dry the ear with borated cotton and afterwards insufflate with boracic acid. I find this treatment remarkably successful and grateful to the patients.

That syr. trifolium comp. is likely to become a very valuable remedy, especially in the diseases of women and children, there can be no doubt; and the reports of its successful exhibition, outside of its preëminently special field in the treatment of venereal disease, is most gratifying. Experience with its use will, without doubt, add many to its list of friends and admirers.

SALEM, Mass.

Correspondence.

PARIS LETTER.

March 16th, 1891.

A remarkable case of hysteria simulating organic disease, lately occurred in one of the hospitals here. The patient when admitted presented all the symptoms of a victim of multiple sclerosis. His speech had the characteristic slow, jerky character. When he walked his legs were affected with an exaggerated tremor, and it was impossible for him to carry a glass of water to his mouth, so great was the trembling produced in the arm.

In addition to these symptoms he had anæsthesia of both forearms and both legs below the knee. There was also anæsthesia of the pharynx and a painful point just above the right eye. Upon inquiry it was found that all these symptoms had come on suddenly after being run over. Now multiple sclerosis never comes suddenly, and this taken in connection with the whole train of symptoms, made possible the diagnosis of hysteria.

Acting on this supposition the man was given small doses of bromide, great stress being laid upon its curative powers. In less than a month the whole train of symptoms had disappeared and he was discharged cured.

The practical lesson to be learned from this, is that hysteria may imitate organic disease in a striking degree, and that one should always be on guard against a false diagnosis in a case of this kind. Had this case been diagnosed as multiple sclerosis and treated as such, it would have certainly run on into obstinate chronic hysteria and very likely ended in organic disease.

It is very amusing to note the way in which Koch's discovery of a cure for tuberculosis has been received in France. They not only refuse to see anything in it, but in addition they make all manner of fun of the whole thing.

The following story of the German emperor was told in the gossip column of one of the leading medical journals: As this august personage had a great deal of trouble and pain in his ear he was quite anxious about the result. On this account he called a council of eminent physicians and demanded of them that they should tell him plainly what the trouble was. Was it cancer or tuberculosis? They declared it to be tuberculosis, and the bacilli were sought for in Koch's laboratory and found. After this it seemed as if the emperor had but one idea. If the great Prof. Koch had found means to protect animals against tuberculosis, why should not he profit by the discovery as well and he was determined to be inoculated.

Koch objected energetically, saying that the effects upon men might not be the same as upon animals, that there was need of much more experience with the new method, etc. The emperor, however, declared that it was time to begin the experiments upon man, and injections were therefore begun in Berlin and subsequently undertaken all over the world.

The Emperor watches the result, and takes careful note of the points at issue; the battle, so to speak, between the disease and the remedy.

The longer he watches, the more thankful he is to Koch for not allowing him to try the inoculation, and he has finally decided that he will wait until the methods are a little more perfect before he tries the inoculation himself.

Hydronephrosis: The patient was a woman 44 years old, who had always enjoyed good health until some months ago, when

she was taken with colic, and pus was passed with the urine.

Some time after this, there appeared in the left side of the abdomen a tumor, which grew gradually larger and larger, and soon there appeared constitutional symptoms in the shape of fever, night-sweats, and emaciation. A vaginal examination revealed the fact that both *culs de sac* were clear, and that the uterus was normal and free. Uterine and ovarian tumors being thus excluded, the diagnosis of hydronephrosis was made.

An incision was made in the median line, the tumor punctured, and three litres of pus withdrawn.

As the tumor was firmly adherent to the peritoneum, no attempt was made to detach it; but the cavity was thoroughly washed out and drained. Daily injection was practiced, and at the end of three months the cavity filled up little by little, until only a small fistula was left.

This tumor was caused, like the majority of this kind of cyst, by the lodgment of a calculus in the ureter, compelling the urine to collect behind it, and slowly dilate the pelvis of the kidney.

It sometimes happens that the calculus is displaced and falls into the bladder, in which case the sudden disappearance of the tumor is the natural result.

On the other hand, the tumor, constantly increased by the urine which is secreted by the undestroyed cells, continues to grow, and may reach an enormous size, there being one case on record where such a tumor contained ten litres of fluid.

The contents of these tumors is at first normal urine, but it frequently becomes changed into pus, the pyogenic microbes finding their way from the bladder up along the course of the ureter.

When feasible, it is good practice to extirpate these tumors, but if they are large and adherent, this may be impossible, and the treatment must always be directed by the special circumstances of the case.

W. F. Robinson.

SEXUAL ETHICS.

Editor Medical Age:

I do not usually comment on any article which I may chance to read, however much I may differ from its statements or teachings, believing that as a rule there is some good to be found and knowledge to be gained from every such effort; but in your last issue there is a short article under the title of "Sexual Ethics" which attracted my attention, and upon which I desire a clear statement of doctrine. The quotation in this article declares that immortality is "gained through the power of love," which consists of holiness of matrimonial love. Now, are these statements true? If so, then the path to immortal life is through sexual relation, denuded of the drapery with which this author has surrounded it. Again, while the sexual act may be, and usually is (when performed within the marital vows) for a higher and nobler purpose than that of the lower animals, the physiological necessity and object is the same; and saying the most we can for it, the object in man and the lower animals is the same, which is procreation—which act neither insures immortality to the procreator nor to the thing generated! And by what rule are we to determine that a man has performed an act which insures to himself immortality by enjoying the right of his matrimonial relations, any more than one of the lower animals performing the same act? The writer says, to attain this much-desired power we must grow beyond the limits of individuality, and gain it by sacrifice and conquest. Of what, and wherein, lies the conquest? Why, according to the theory advanced, the sacrificial offering is ended, the conquest is successful, and the acme of triumph reached when this sacrificing warrior has succeeded in binding with the matrimonial chains some one of the opposite sex capable with him of performing the sexual act! I believe this to be wrong in principle, weak and puerile in argument, and dangerous in conclusion. It is not necessary, for our present purpose, to argue the wisdom of Divine intelligence in the establishment of sexual demands and appetites within us in connection with the principle and process of generation, nor would I for a moment deny its importance or belittle its function in the animal economy, and none go further to defend its sanctity or plead for its purity; but that it can by any method—pure and holy though it may be, so far as the act is concerned—confer on the recipient of its benefits or its pleasures, either directly or indirectly, immortality, I am compelled to deny.

A. D. Hill, M.D.

Augusta, Kansas.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial

THE PREVALENCE OF INFLUENZA.

Influenza, in its protean manifestations, has again become epidemic, and, it is now agreed, is almost as universally distributed as the epidemic of 1890. From Europe and Eastern countries, and from every portion of the United States, reports of its prevalence accumulate.

It seems to be the general sentiment of the profession, that the present epidemic is not so violent in its manifestations as the last, though the dangers of the stage of reaction after the acute symptoms subside seems equally to be feared. The importance of guarding patients during convalescence, and of continuous tonic and reparative treatment, cannot be too strongly insisted upon. It is the complications or sequelæ that are most to be dreaded.

It would appear also to be a well substantiated impression among medical observers, that the general tone of vitality, either from climatic reasons or as a result of last year's epidemic, is very much lowered, and renders many very susceptible to the development of the graver complications of the malady.

The Michigan Board of Health, in the Secretary's report dated April 2d, states that during February and March influenza has been the most prevalent of all diseases in this State.

These facts are regarded with alarm by the health authorities, inasmuch as statistics for a series of years prove that nearly every one of the most dangerous diseases in Michigan increases proportionately in severity with the prevalence of *la grippe*.

It is suggested by many careful observers, that to the indiscriminate resort to the coal-tar products as antipyretics or analgesics in influenza, is to be attributed much of the depressed vitality incident to the sub-acute or second stage of the disease; and not a few go so far as to dispense with these remedies entirely, and rely chiefly on securing perfect action of the emunctory organs, extra nutrition, stimulants, vascular tonics, hæmatics, small doses of the cinchona preparations, and insist on confinement from exposure until all symptoms of lowered vitality have disappeared.

THE CONTAGIOUSNESS OF CHRONIC URETHRAL DISCHARGES.

This is a question which the physician is frequently asked, and which many practitioners are not always able to intelligently answer. Indeed, there seems to be much variety of opinion among specialists in venereal diseases as to when the contagious stage of a gonorrhœal urethritis ceases.

Dr. George E. Brewer, in a paper read before the Section on Genito-Urinary Surgery of the New York Academy of Medicine, February 12th, 1891, presented a review of the opinions that have been maintained by eminent authorities; the existing state of knowledge on this subject; and the importance of determining the contagiousness of urethral secretions of patients contemplating marriage. He believes that the failure to recognize contagiousness in such cases results frequently in communicating gonorrhœa and attendant complications to the wife.

As early as 1785, Kühn called attention to the fact that the discharges resulting from a gonorrhœa remained contagious so long as they contained pus. The opposite opinion was held by Hunter, who denied the possibility of contagion from the gleety discharges of a chronic urethritis. This view was also shared by Bell and Ricord. In a paper entitled "Gonorrhœa a Non-specific Disease," published in the New York Medical Independent in 1864, A. K. Gardiner strenuously denies the contagious element in any, save the discharges from the most acute stage of the disease; and says regarding gleet that it is "allowably benign and innocuous."

Noeggerath, on the other hand, in a paper published in 1872, concludes that a man who has once been the subject of a gonorrhœal

urethritis, *never* fully recovers, that the disease invariably lingers in the glands and ducts emptying into the canal, and may at any time furnish a secretion which may infect those with whom he has sexual relations. He also states that nine-tenths of all women married to men who have had gonorrhœa, sooner or later become the subject of incurable and painful inflammatory disease of the uterus, tubes, or ovaries; that this infection may take place rapidly, and manifest itself as an acute affection, or by means of a slow and unrecognized process to which he gives the name of "latent gonorrhœa." In a subsequent paper, read before the American Gynæcological Association in 1876, the author reiterates these opinions, and adds that 99 per cent. of all cases of sterility can be directly traced to gonorrhœa.

Since the discovery by Neisser, in 1878, of the gonococcus, and the establishment of its relationship to this disease, but one opinion can logically be held by those who accept his theory of gonorrhœal inflammations, and that is, that all secretions containing this micro-organism are capable of transmitting the disease under favorable conditions. In his work* under this subject, Ernest Finger emphasizes this point, and states regarding marriage, that it should be absolutely prohibited in all cases where the existence of a chronic urethritis is evidenced by the presence of the "morning drop" in the urine, until the following facts have been established:

1st. That after from two to four weeks of daily observation, the secretions from the urethra are found to be *free from pus and made up wholly of epithelial cells:*

2d. That no gonococci can be detected by the microscope, even after a purulent discharge has been established by the employment of irritating injections of corrosive sublimate or nitrate of silver, and:

3d: That neither prostatitis nor stricture exists.

SOME SUGGESTIONS AS TO THE EDUCATION OF GIRLS.

William Warren Potter, M. D., President of the New York State Medical Society, devoted his anniversary address at the meeting, February 4th, to a consideration of the question, "How Should Girls be Educated?"

He makes some trite, but too little recognized common sense suggestions regarding food, clothing, rest, and study, that are worthy of being universally observed.

He advises that young girls especially be taught the importance of eating good, but plain, wholesome, nutritious food, and, above all, the necessity of eating a hearty breakfast. Too many young women have grown up to regard it as vulgar to indulge the appetite at the morning meal, and have been allowed to cultivate the habit of "mincing" and "sipping" at a few dainty dishes, or have been permitted to go without breakfast altogether.

There is no better test of a woman's health than her ability to eat a hearty breakfast, and it might also be said that her physical beauty is in direct proportion to the amount of beefsteak or mutton chops she can put into herself at this meal.

The dress of the school-girl should be so constructed as not to violate the simplest laws of health. The fabric should be warm and the underwear particularly thick, though soft and fluffy, in climates where the temperature changes are so sudden and extreme as this—all to be supported from the shoulders and not allowed to drag from the waist, and interfere with the proper development of the abdominal and pelvic organs.

Four hours a day of study or school work, for girls between the ages of twelve and sixteen years, are quite as many as they can healthfully endure.

During each catamenial period they should be permitted to forego the recitation-room, and mothers should insist that their daughters at this time, deny themselves all excessive or consecutive, mental or bodily effort.

PHYSIOLOGICAL ACTION PREPARATION AND TRERAPEUTIC EFFECTS OF THE CANTHARIDINATES.

Prof. Liebreich's paper on the treatment of tuberculosis by the injection of cantharidinate of potash, read before the Berlin Medical Society, Feb. 25th, was subsequently published in the Berliner Klinische Wochen-

*"Die Blennorrhöe der Sexualorgane und ihre Complicationen," 1888.

schrift, and abstracts of it have been reproduced in European and American journals.

It is reported that the facts presented by Liebreich are exciting almost as much interest as Koch's announcement of "tuberculin." From the paper published, it appears that Liebreich has been for a long time investigating the pharmacological and therapeutical properties of salts of cantharidinic acid. In pursuing his study of Koch's remedy in laryngeal tuberculosis and lupus, Liebreich reached the conclusion that the reaction must be due to a substance which acts locally, in a similar way to that we are accustomed to find in those substances that belong to the group of caustic or acrid principles. His investigations of the Spanish-fly (cantharis) and its active principle,—a volatile acrid, bitter, solid, crystallizing in four-sided prisms—led to experiments with a solution of cantharidinate of potash.

The favorable results he obtained led him to induce Drs. Paul Heymann and B. Fraenkel to test the efficacy of the agent, and their experience confirmed his own.

As to the physiological action of cantharides, Liebreich pointed out that Robiquet first extracted the active principle, cantharidin, as a chemically pure crystalline substance, which can be weighed and dosed with exquisite accuracy. Its toxic qualities, and especially its irritating action on the kidneys and urino-genital apparatus are well known, and have been described by Cornil, Ida Eliaschoff, and others. When cantharidin is taken internally serum is exuded from the capillaries, not only of the kidneys, but also of the lungs and of other organs, as has been proved by experiment. This is the characteristic action of cantharidin. The irritability of the capillaries varies in the different parts of the organism. It is assumed that an irritated condition of the capillaries favors the process of exudation. Thus a dose of cantharidin, too small to exercise a toxic action on healthy capillaries, will produce exudation in inflamed capillaries. The exudation of serum in tissue may act in two ways: 1, By nourishing the cells and bringing back to their normal condition badly nourished cells, and: 2 By the disinfecting action of the serum at the affected spot.

Many substances were tried to hold the cantharidin in solution for subcutaneous injection, and at last it was accurately determined how much caustic potash was necessary to dissolve the cantharidin. A clear solution, with slight alkaline taste, in the strength of two deci-milligrammes cantharidin to a cubic centimeter, was decided upon.

The first experiment was made with doses of 1-50 milligramme. These doses were increased until at length a maximum dose of six deci-milligrammes was made. This is the largest dose that can be injected subcutaneously with safety. The usual dose for therapeutical purposes lies between these two extremes, and is from one to two deci-milligrammes.

Liebreich gives the following directions for the preparation of cantharidinate of potash or soda. The cantharidinate of soda, as well as the other salts of cantharidinic acid, described by Dragendorff and Masing, are not purely chemical bodies, owing probably to the variable quantity of cantharidin mingled with them, so that they have not hitherto been capable of being used for exact dosage. To obtain a constant solution, weighed quantities of cantharidin were dissolved by prolonged heating with alkali, and then carefully diluted to the required degree of concentration. It results from this that the quantity of alkali theoretically needed for the conversion into cantharidinate was not exceeded, so as to keep the cantharidinate in solution. A large number of experiments showed that to obtain a solution that would remain clear on dilution and cooling, it was necessary to use twice as much potassic hydrate and half as much again of sodic hydrate, as of the amount of cantharidin employed. The alkali must be pure, dry, and free from carbonic acid. Solutions were therefore prepared as follows:—Cantharidin, 0.20 gramme; potassic hydrate, 0.40 gramme most carefully weighed, and heated over a water bath in a 1000 cubic centimeter flask, with about 20 cubic centimeters of water, until a clear solution resulted; then water was very gradually added, whilst still heating, to about the full quantity, which was quite completed after cooling. Or: Cantharidin, 0.20 gramme; sodic hydrate, 0.30 gramme, were dissolved in the same way up to a litre.

Liebreich states that cantharidin is far from being a specific merely for tuberculosis, as its action may be of benefit in other diseases as well. In using the remedy he especially cautions to watch its effects on the kidneys, and never to use it where the kidneys are affected. It is not necessary to give injections daily, but a day, at least, should intervene between the injections.

Drs. Heymann and Fraenkel, before the Berlin Medical Society, Feb. 25th, gave the results of the treatment of twenty-seven patients with cantharidinate of potash which were as follows:

Ten patients were under treatment so short a time that they were left out of consideration; of the seventeen remaining cases, eleven were of extensive tubercular changes in the larynx, of the worst type; while six were of chronic laryngitis. All patients were treated at an out-patient department, and followed their usual mode of living in every way. Local inflammatory signs at the site of the injection occurred but once; abscesses never developed. The injection was given, whenever practicable, between the two shoulder blades.

In the eleven cases of tubercular disease of the larynx, most extensive alterations had already taken place. The voice was affected in all cases, either hoarse, or as in most cases, completely aphonic; the general condition was poor. Generally after three, or at most four injections, the general condition of the patients became better, their appearance brighter. At the same time, a remarkable improvement in the voice took place. This gradually increased, so that in some cases there was scarcely any perceptible hoarseness after a while.

The character and number of bacilli did not seem to change. The change in the lungs was also marked; moist râles disappearing, the dullness decreasing somewhat and the cough becoming less and less, the expectoration more thin and watery. In four cases the cough ceased entirely. In most cases night sweats diminished or ceased altogether. In one case with hectic fever, the fever disappeared entirely after the fourth injection. Laryngoscopically, the cases showed first a decrease in the redness of the larynx; soon the infiltration of the tissues became less and less; granulations became paler and more flattened. A number of ulcers healed completely, while others are fast approaching that state. The œdematous swelling of the arytenoid cartilages was lessened in all cases. The healing processes go on gradually and insensibly, in the same way that we are accustomed to see syphilitic affections disappear, by the use of the iodide of potash.

In the six cases of chronic laryngitis, one case refused to respond to treatment; in the second case, the catarrhal ulcers healed completely after the tenth injection.

In three cases marked decrease in the redness and swelling could be seen, and improvement was very noticeable.

A NEW METHOD OF INDUCING PREMATURE LABOR.

Dr. Schrader of Hamburg describes, in the Centralblatt für Gynäcologie, a method of inducing premature labor based on his observation that cold is a greater excitant of the nervous and muscular systems, than warmth.

Continuous irrigation at the temperature of 45° F. is impracticable on account of the pain it causes, but a cold douche alernating with a warm one can be borne. Dr. Schrader connects a vaginal glass tube, by means of a T-shaped piece and the necessary India-rubber tubes, to two irrigators, one of which contains the cold and the other the warm water. By allowing now one instrument and now the other to work, cold or warm water may be sent through the vaginal tube into the vagina. Two assistants are required—the one to fill the irrigators, the other to work the douche. For each sitting about twenty-four litres of cold and half the quantity of warm water at 112° are required, and the douche has a fall of about one metre and a half. The irrigation begins with the warm current, and before the cold water is turned on pressure is made on the perineum with the vaginal tube, so as to allow all the warm water to run away from the vagina. The same plan is observed before the change from cold to warm, by which means the alteration in the temperature, as felt by the patient, is always sudden. Each time about two litres of cold and half the quantity of warm water are used. The douche is generally repeated about every hour and a half until labor is active enough to make its continuance probable. Of eighteen women treated by this method exclusively, and four others who were partly so treated, one died of eclampsia twelve hours after delivery, but all the others made a good recovery. The eighteen women who were treated by the douche exclusively had twenty children, of whom fifteen, that is 75 per cent., were alive. These cases required on an average ten douches and a half; in half the number three douches and a half were sufficient.

Book Notices.

Woods' Medical and Surgical Monographs. Vol. 9, No. 3, comprises The Modern Diagnosis of the Stomach, by J. M. Russer, M.D. Unsoundness of Mind, In Its Legal and Medical Considerations, by J. W. Hume Williams. Baldness and Grayness, Their Ætiology, Pathology and Treatment, by Tom Robinson, M.D.

There are many problems relating to the successful treatment of diseases of the stomach with which the average physician is not familiar. Modern methods have much improved the *modus operandi* of local treatment of the stomach by irrigation and antiseptic medication. After discussing the place of the stomach in the function of digestion, the author takes up at length the use of the œsophageal tube in the diagnosis of cancer, chronic ulcer, catarrhal inflammations, dilatation, nervous dyspepsia, and secondary disturbances of digestion.

J. W. Hume Williams considers the legal and medical views of unsoundness of mind—monomania, moral insanity, impulsive insanity. The subject is a difficult one to cover in so brief a treatise. Expert alienists will find little novelty in it. It may serve, however, as an aid to the recognition of conditions which distinctly, according to law and medicine, constitute unsoundness of mind—a question the physician is not infrequently asked to decide.

Baldness and grayness are perennially interesting subjects. Beyond the recognition of the diseases that cause these conditions and their proper medicinal treatment, our knowledge is limited. The question of how to restore the hair after the hair follicles fail to perform their function, remains for future discovery. Dr. Robinson, therefore, contents himself with a presentation of the hair diseases and their proper differentiation; but confines himself to two pages of suggestions as to treatment. In these he commends certain formulæ he has found useful, and points out the necessity of some general tonic treatment.

A Hand-Book of Local Therapeutics.

P. Blakiston, Son & Co,, the medical publishers of Philadelphia, announce for early publication "A Hand-book of Local Therapeutics," being a practical description of all those agents used in the local treatment of disease, such as ointments, plasters, powders, lotions, inhalations, suppositories, bougies, tampons, etc., and the proper methods of preparing and applying them. The following gentlemen have assumed the authorship: Harrison Allen, M.D.; George C. Harlan, M.D.; Charles B. Penrose, M.D.; and Arthur V, Harlingen, M.D.

The work will form a compact volume of about 400 pages, arranged in a manner to facilitate reference, and containing, besides the usual index, a complete index of diseases, that will greatly enhance its usefulness.

On Double Consciousness—Experimental Psychological Studies. With an Essay on Experimental Psychology in France. By Alfred Binet. Open Court Publishing Co., Chicago, Publishers. 1890. Price, 50c.

The subjects discussed in this *brochure* are: Proof of Double Consciousness in Hysterical Individuals—The Relations between the Two Consciousnesses of Hysterical Individuals—The Hysterical Eye—Mechanism or Subconsciousness—The Graphic Method and the Doubling of Consciousness—The Intensity of the Sub-conscious States—The Rôle of Suggestion in Phenomena of Double Consciousness—Double Consciousness.

Many psychological problems are still involved in doubt, and any contribution recording results of experimental studies of them should be welcome to the physician, inasmuch as a knowledge of psychology is a valuable aid to diagnosis and practice.

Essentials of Surgery, with Description of the Handkerchief and Roller Bandages—With Appendix containing Directions and Prescriptions for the Preparation of the Various Materials used in Antiseptic Surgery. By Edward Martin, A.M., M.D. Fourth Edition. Revised and Enlarged. Published by W. B. Saunders, Philadelphia. 1891. Price, cloth, $1.00. Interleaved for Taking Notes. $1.25.

This is a late number of Saunders' Question Compends, the form and character of which is already well-known to medical readers. It is arranged in the form of question and answer, and designed especially for students of medicine who desire a condensed

resumé of modern surgical practice. The fourth edition has added an appendix of useful prescriptions and formulæ required in antiseptic surgery.

VICK'S FLORAL GUIDE FOR 1891.

No lover of a fine plant or garden can afford to be without a copy of this work. It is an elegant book of over 100 pages 8¼ by 10½ inches, beautiful colored illustrations of Sunrise Amaranthus, Hydrangea, etc. Also instructions for planting, cultivating, etc.; full list of everything that can be desired in the way of Vegetable and Flower Seeds, Plants, Bulbs; full particulars regarding the cash prizes of $1,000 and $200; the novelties that have been tested and found worthy of cultivation.

The book costs nothing, because the ten cents sent for it can be deducted from the first order forwarded. We advise our friends to secure a copy of James Vick, Seedsman, Rochester, N. Y.

SCRIBNER'S MAGAZINE FOR APRIL:—

THE END OF THE VOYAGE.

OCEAN PASSENGER TRAVEL. By John H. Gould.

A KANGAROO HUNT. By Birge Harrison.

HORACE, BOOK I., ODE XXI.—In Honor of Diana and Apollo. [Dr. Francis's Translation, 1831.]

GASPAR NUNEZ DE ARCE. By Rollo Ogden. With portrait engraved by G. Kruell.

THE MEANING OF THE DAKOTA OUTBREAK. By Herbert Welsh.

SPRING SONG. By Graham R. Tomson.

THE PHENIX. By Bliss Perry.

WHAT IS RIGHT-HANDEDNESS? By Thomas Dwight, M.D.

WHERE THE ICE NEVER MELTS—The Cruise of the U. S. Steamer Thetis in 1889. By Robert Gordon Butler.

JERRY.

THE RELIEF OF CAPTAIN NELSON. By A. J. Mounteney Jephson, of the Emin Pasha Relief Expedition. Illustrated by Frederic Villiers.

NIGHT. By Archibald Lampman.

THE STORY OF THE FRESH-AIR FUND. By Willard Parsons.

THE POINT OF VIEW. Cloistral Criticism—As to the Long-Engaged—The Investigation of Crime.

Notes and News.

The New M.D.

He has just come out of college,
With his head crammed full of knowledge;
So he thinks! So he thinks!

He has come the world to alter;
In reform he'll never falter;
So he thinks! So he thinks!

And he'll banish all old fogies,
Just like a lot of bogies;
So he thinks! So he thinks!

In a few years he'll grow tired,
And won't act like one inspired;
So he won't! So he won't!

He will learn life's hard and dreary;
That the world ain't run by theory;
So he will! So he will!

He will then grow very prudent,
And will laugh at the young student;—
Yes, he will! Yes, he will!

And he'll say: "I once was really
Very green and very mealy."
Sure's you live! Sure's you live!

A Moral for Doctors.

The following case is reported as having recently been tried:

Dr. S. rendered services, medical and surgical, to a Mr. M. during a period of five years, when he died, and his estate was probated. The doctor's bill (something over $500) was presented, with affidavit, and objected to on the part of the administrators. Upon the hearing it was shown that the doctor did not keep a ledger, but relied only on his pocket record in which he had made his charges by signs. The doctor swore to each item of entry, and attempted to explain what each character used meant. The defense here objected, which the court sustained. Then the doctor attempted to prove his books by the old common law rule, that is, by several witnesses who had settled accounts with him by these books, but they could not tell for what the charges indicated by the signs and letters used were. Then by two brother physicians the doctor tried to show that all physicians used the same kind of books; but they, of course, could not tell, from an examination of the books, what the services rendered were.

The judge, in deciding the case, totally ex-

cluded the books, and thereby the doctor was defeated *in toto*. The court and defendants admitted the equity, that is, that services had been rendered, but the court was compelled by *the law* to totally ignore everything because the doctor could not show that somebody else was thoroughly acquainted with his system of book-keeping.

Sale of "Tuberculin."—

The official regulations as to the sale of "tuberculin" have appeared. The chemists are to obtain their supply from Dr. Libbertz, who will continue to prepare it under the supervision of Professor Koch. It will be sold in sealed bottles containing from one to five cubic centimeters, and marked with the date of preparation. The chemists are to use the same precautions as with poisons, and only sell in original bottles and upon the written prescription of medical men. A special book is to be kept for the entry of sales, etc., and in each case the quantity sold, the date of preparation, of purchase, and of sale, and the name of the physician prescribing it, must be noted. Six months after preparation it may no longer be sold. Bottles six months old should be returned to Dr. Libbertz, who will exchange them for new ones without extra charge. The price has been fixed at six marks (6s.) for a cubic centimetre, and 25 marks (£1 5s.) for five cubic centimetres.—*Medical Record.*

The Phonograph as an Aid in the Study of Disease.—

Some time ago we drew attention to the probability that the phonograph would before long be found of considerable use in the study of diseases characterized by abnormalities of speech. From the notices of the meeting of societies during the coming week, it will be seen that two demonstrations of its value will be given. On March 11th, at the Hunterian Society, Dr. Hughlings Jackson will demonstrate a phonogram of a patient subject to disseminated sclerosis; and on March 10th, at the Royal Medical and Chirurgical Society, Dr. Hale White and Mr. Golding-Bird will demonstrate before the meeting phonograms of two patients suffering from the peculiarity of speech to which the term "idioglossia" has been applied. They will also show the patients, who have now, it is stated, considerably improved under the treatment. Dr. F. Taylor and Dr. Hadden will also show cases of this disorder.—*British Medical Journal.*

Influence of Food on Physique and Character.—

Dr. Oliver Wendell Holmes is quoted as offering the following sentiments regarding this topic:

Most assuredly I do believe that body and mind are much influenced by the kind of food habitually depended upon. I am persuaded that a too exclusively porcine diet gives a bristly character to the beard and hair, which is borrowed from the animal whose tissues these stiff-bearded compatriots of ours have too largely assimilated. I can never stray among the village people of our windy capes, without now and then coming upon a human being who looks as if he had been split, salted, and dried, like the salt fish which has built up his arid organism. If the body is modified by the food which nourishes it, the mind and character very certainly will be modified by it also. We know enough of their close connection to be sure of that, without any statistical observations to prove it.

A Laboratory for the Study of New Drugs.—

It is reported that a novel experiment is to be tried in connection with the New York Homœopathic Medical College and Hospital, and one having a counterpart only at the University of Strasburg. This is the establishment of a laboratory for the purpose of analyzing drugs and testing their effects upon human beings. The originator of the plan is Dr. T. F. Allen, Director of the Laboratory of Experimental Pharmacology at the College.

This laboratory will develop a rather unique industry—that of "drug-provers," or the persons upon whom Dr. Allen will experiment. A pecuniary reward will be offered, amounting to about $5 a week. Both men and women are needed, and young physicians are preferred.

Surgical Cleanliness of Barbers' Uutensils.—

The foreign correspondent of the Journal of the American Medical Association writes of a Lyons barber, who is an emulator of Lister: His razors are mounted in alumin-

ium, the scissors are nickeled, the brushes being provided with bristles which are screwed on to the wood, thus avoiding the necessity for the employment of glue or stitches. After use, these instruments are well washed, and then subjected to a temperature of 120° C., in an oven enclosed in a layer of glycerin, heated by a range of gas jets.

Some time ago, the Board of Health of the Seine adopted, at the instance of M. Lancereaux, a resolution recommending similar precautions (the purifying of instruments used by hair-dressers by means of the flame of a spirit-lamp, and antiseptic solutions).

The Influence of Tobacco on Digestion.—

Ydan-Pouchkine made a series of careful experiments on seven persons in good health, but who were not accustomed to tobacco. His results were as follows: Tobacco increases the quantity of the gastric juice, but diminishes its acidity. The amount of free hydrochloric acid is decreased, and consequently the digestive power of the gastric juice; its peptonizing power is also diminished. These effects last for a certain length of time. On the other hand, the movements of the stomach and its power of absorbing are increased. Tobacco has no effect on the acidity of the urine.—*Boston Med. and Surg. Journal.*

A Medical Protective Association Sued.—

The Medical Record (New York) says: The President of the Physicians' Protective Association of Sharpsburg and Etna, Pa., has been sued for $10,000 damages. The complainant received a notice from the President of the Association, stating that the physicians had organized themselves into an association to enable them to collect delinquent accounts. The plaintiff's account, it was added, was over-due, and unless he paid it or made satisfactory arrangement by July 1st, 1890, his name would be placed on the list of delinquents, and medical attendance would be refused him. The plaintiff claims he was not indebted to the defendant at all, and therefore paid no attention to the bill received.

Seventh International Congress of Hygiene and Demography.—

This Congress holds a meeting at London, England, August 10th to 17th, 1891. The aim of the Congress is to awaken public interest in the progress of Hygiene and Demography, by which latter term is understood the study of the life conditions of communities from a statistical point of view; to afford persons interested in these subjects an opportunity of meeting, with the object of advancing their progress; and, by conferences and debates, to elucidate questions relating to Hygiene, Demography, and Public Health. The address of the officers and Organizing Committee is 20 Hanover Square, London.

Therapeutic Application of Coffee.—

In a paper on Coffee: Its Use and Abuse, Dr. I. N. Love says:

"Coffee as a prompt diffusible stimulant, either by the stomach or by injection into the rectum, is, in all cases of shock, preferable to alcohol. It is antagonistic to malaria, and specially destructive to the typhoid bacillus and the cholera germ, and for this reason is an admirable remedial agent in these conditions, both as a direct stimulant, antiseptic, and encourager of elimination. It supports, tides over dangers, helps the appropriate powers of the system, whips up the flagging energies, enhances the endurance; but is in no sense a food, and for these reasons and many others, it should be used temperately."

Shall Doctors with Titles Use Them?—

The Toledo Medical Association has revived this question by passing resolutions to the effect that, in future, the members will refrain from appending their various titles to their names when contributing to medical literature. While there exists an abuse of titles for advertising purposes, it would be necessary to revolutionize human nature to effect the complete abrogation of titles evidencing certain honorable standards of educational acquirements. Nations, states, educational institutions, all have recognized the stimulus that special recognition by titles confers, and we will continue to do so, whatever resolutions may be passed to the contrary.

National Association of Railway Surgeons.—

On account of the meeting of the American Medical Association, it has been decided to hold the next meeting of the National Association of Railway Surgeons at Buffalo, April 30th and May 1st and 2d, to which all railway surgeons are cordially invited. To all railway surgeons sending their names and addresses to the Corresponding Secretary, a copy of the Constitution and programme will be sent; those wishing to read papers should send in the titles without delay. A. G. Gumaer, M. D., Corresponding Secretary, Buffalo, N. Y.

Resignation of the Editor of the St. Louis Weekly Medical Review.—

Dr. Bransford Lewis has resigned the editorship of the St. Louis Weekly Medical Review, and will soon leave for an extensive and protracted trip in Europe. Dr. Lewis will act as special correspondent for the St. Joseph Medical Herald during his absence, furnishing monthly letters. Dr. G. W. Broome will succeed Dr. Lewis as editor of the Review.

Dr. W. F. Waugh Resigns.—

Dr. Waugh has been a member of the Faculty of the Philadelphia Medico-Chirurgical College ever since it opened its doors as a teaching institution, in 1881. During the first term he gave the first course on Therapeutics, and was then transferred to the chair of Practice, which he has since occupied. His resignation takes effect at the end of the present term.

Congress of American Physicians and Surgeons.

The meetings of the Congress of American Physicians and Surgeons will be held in Washington from 3 to 6 P. M., September 22d, 23d, 24th, and 25th, 1891. William Pepper, Chairman of the Executive Committee.

Date of Meeting of the Michigan State Medical Association.—

The twenty-sixth annual meeting of the Michigan State Medical Society will be held in Saginaw, Mich., on Thursday and Friday, June 11th and 12th, 1891.

Therapeutic Brevities.

New Methods of Treating Erysipelas.—Rosenbach's method consists in washing, not only the erysipelatous patch but the entire neighboring surface, with soap, and then bathing daily these patches with five-per-cent. solution of phenic acid dissolved in absolute alcohol. Very brilliant results are claimed to follow this method, both as regards the course of the disease and the febrile phenomena. Even absolute alcohol is said to produce a favorable action.

In Nolte's method the entire affected surface and surrounding zone are painted twice daily with a mucilage of gum Arabic containing from three to five per cent. of phenic acid.

The method of Koch is the application, by means of a camel's hair pencil, of creolin one, iodoform four, and lanolin ten, parts, over the affected area, then covering with a thin layer of gutta-percha. This is especially applicable to facial and scalp erysipelas.

Nussbaum and Brumn employ ichthyol in collodion.

Hallopean recommends a five-per-cent solution of salicylate of sodium. Thick cloths are wet with this solution, applied to the affected parts, and then covered with a layer of rubber cloth so as to prevent evaporation. Almost immediate relief is obtained, and a cure is said to follow on the third to the fifth day.

Hunter recommends the injection of carbolic acid into the healthy skin at a distance from the part infected. This method of treatment is extremely painful, and only applicable in severe cases of the face or hairy scalp.

Dr. Kraske advises making an incision in the healthy skin around the erysipelatous patch before applying the antiseptic substance.

Wölfler makes use of mechanical compression by bandages applied so as to circumscribe the inflamed tissue, while Dr. Kraske proposes elastic rubber bands to accomplish the same effect, where these are applicable. —*Therapeutic Gazette*, Nov. 10th, 1890.

A New Method of Nasal Irrigation.—Lennox Browne, the distinguished specialist in diseases of the throat and nose, writes to the Lancet (London) regarding a new method devised first by Dr. Pins of Vienna:

To obtain its maximum of usefulness, there are three points in which the instrument and its mode of use are capable of improvement. 1. The nozzle should be oval, so as to fit the

nostril without undue distension: 2. It should be made of hard rubber, and perforated in five or six places, as is the case with the nasal syringe which goes by my name; for by this means a combination of a coarse spray and a full stream is obtained; and in this connection it has to be noted that, whatever method of irrigation is employed, the fluid is bound to return by the opposite nostril, provided the nostril of entrance is thoroughly blocked by the nozzle of the irrigator: 3. The nozzle should not be inserted up the nostril, but along the floor; for while a stream in the former direction is not necessary for efficient nasal irrigation, it is very liable to produce headache and other symptoms of discomfort.

Medical Properties of Vegetables.—Spinach has a direct effect upon the kidneys.

The common dandelion, used as greens, is excellent for the same trouble.

Asparagus purges the blood. Celery acts admirably upon the nervous system, and is a cure for rheumatism and neuralgia.

Tomatoes act upon the liver.

Beets and turnips are excellent appetizers.

Lettuce and cucumbers are cooling in their effects upon the system,

Onions, garlic, leeks, olives and shalots, all of which are similar, possess medicinal virtues of a marked character, stimulating the circulatory system and the consequent increase of the saliva and the gastric juice, promoting digestion.

Red onions are an excellent diuretic, and the white ones are recommended to be eaten raw as a remedy for insomnia. They are tonic and nutritious.

A soup made from onions is regarded by the French as an excellent restorative in debility of the digestive organs.

A New Substitute for Santonin.—According to Dr. Coppola santonin is not a true vermicide, its action on threadworms being that of a convulsant only, causing movements very similar to those due to epilepsy. In this state the worms are unable to coördinate their movements, and are easily expelled from the intestine by a purgative. Santonin also labors under other disadvantages; it is very easily absorbed by the mucous membrane of the gut, and it sometimes produces toxic effects. A much better vermicide is to be found in a compound of santonin, santoninoxym, which he has recently prepared. This actually kills the worms, and is well borne in much larger doses than can be given of santonin. The best plan is to give for two or three days three times, as large a quantity as is ordinarily prescribed of santonin, each dose being followed by a purgative.

The Treatment of Metrorrhagia in Childbed.—Braun states that in cases of metrorrhagia occurring within sixty hours of parturition, it is necessary that we should determine the condition of the uterus. If it is not firmly contracted, energetic pressure should be made at once upon the fundus, and all clots removed from the vagina by the finger. If the hæmorrhage persists and continues after pressure upon the uterus, it is well to introduce a piece of ice into the vagina. If grave symptoms arise from the hæmorrhage, 1 or 2 drachms of fluid extract of ergot with 20 drops of the tincture of nux vomica may be given, and repeated in half an hour if the uterus is not contracted. Cold should be applied to the belly and used by vaginal injections. Internally it may be well to administer rum or strong wines.—*L'Union Médicale.*

The Management of Sympathetic Ophthalmia.—At a meeting of the Académie de Médecine, in November last, M. Abadie professed to have discovered a mode of treatment in sympathetic ophthalmia which would render unnecessary the enucleation of the injured eye. His plan was, to cauterize, by means of the Galvano-cautery, the edges of the wound in the injured eye, and then inject into its substance a drop of a 1 in 1000 solution of perchloride of mercury. This caused the subsidence of all sympathetic morbid phenomena. Should a single injection not suffice, it might be repeated in a few days, but it was seldom necessary, he claimed, to give more than two or three injections in order to bring about a complete cure of any case, even those apparently the most grave. —*Medical Record*, March 14th, 1891.

Preparation of the Hot Water Bag.—In preparing the hot water bag be sure that all air is excluded. Shake the bag so as to be sure that it contains no air. Nothing is more common than to find these bags half-filled with air and the skin in contact with the air instead of the water. Unscrew the top and press the water to the opening so that the air is driven out. Then with the water overflowing apply the cap. It is better not to completely fill the bag with the water. You may have the bag very light and still have it empty of air.

Viburnum Prunifolium in Dysmenorrhœa.—Since its introduction to the profession, fifteen years ago, *Viburnum prunifolium* has held its own as a remedy for dysmenorrhœa against many drugs then lauded to the skies, but now long forgotten. It will certainly relieve dysmenorrhœa, if the testimony of thousands of intelligent physicians is worth anything. In the nervous phenomena of the climacteric it will diminish reflex activity, acting in precisely the same lines as the bromides, but without the great general depression of their long continued use. Alone, it is not sufficiently sedative to relieve pain, but more markedly antispasmodic remedies—such as hyoscyamus, cannabis Indica, camphor, and conium—must be employed.—*N. Y. Medical Journal.*

Value of Camphoric Acid.—In the sweats of phthisis, this agent possesses advantages over atropine, and other commonly used medicaments, in that it often gives relief without disturbing the digestive tract or cerebro-spinal apparatus. In sweats other than those caused by tubercular disease, camphoric acid exerts an anti-sudorific effect, apparently due to its antiseptic action or its power of destroying the microbian products. No control experiments on animals have been undertaken to prove this theory. Thirty grains of acid in a weak alcoholic julep two hours after the evening meal.—*Bull. Med. du Nord.*, Nov. 28th, 1890.

Inhalations for Ozœna.—Moire recommends the following to be used as a fumigation in the treatment of fœtid nasal catarrh:

℞ Camphor, 1½ drachms.
Tincture of iodine, 3 drachms.
Iodide of potassium, 30 grains.
Tar, 3½ drachms.
Ninety-per-cent. alcohol, 3 ounces.
Water, 6 ounces.

Place this solution on a water-bath, and inhale the fumes for two or three minutes, after which the nasal chambers should be washed out with a spray of 1-to-100 of carbolized water.

—*Medical News.*

Saw Palmetto for Sexual Debility.—I have used *Sabal serrulata* several times in impotence, combined with nux vomica, tincture cactus grandiflora, phosphoric acid, etc., according to each case. I used the saw palmetto on a big, strong-built man, with small testicles. He was about to get married, but, having no erections, called at my office. After three months using saw palmetto in different combinations, his testicles were properly developed. He married, and his wife has borne one child (female) one year after marriage.—Dr. Herman Rietze, in *Med. World.*

Aristol for Fissured Nipples.—Vinay, in Lyon Médicale, has recommended the employment of aristol in the treatment of fissured nipples occurring during lactation. He uses it in cases in which there is much ulceration and pain. The mixture is as follows:

℞ Aristol, 1 drachm.
Liquid vaselin, 5 drachms.

This is to be applied to the breast, and carefully wiped off before the child nurses. After its employment the pain diminishes and cicatrization goes on rapidly. In cases in which the glands become much involved, this preparation of aristol may be rubbed into the enlargements with advantage.

Hydrastinine in Menstrual Hœmorrhage.—Falk has found that hydrastinine is very effective in congestive dysmenorrhœa; menstrual hæmorrhages due to a change in the texture of the uterus; in metrorrhagia due to endometritis; in myoma; etc. He orders the following:

℞ Hydrastinini muriat., gr. ½.
Ext. glycyrrhizæ, q. s.
Ft. tal. pil. No. 10.
Sig.—Take one or two pills daily.

One pill should be taken a few days before the hæmorrhage begins, and two while it continues.

Treatment of Excessive Sweating.—Kapos is said to recommend the following treatment in cases of excessive sweating:

℞ Powdered tannic acid, 4.8 grammes.
Alcohol, 6 grammes.

This is to be made into solution, and employed with friction several times a day, in case of excessive sweating of the axillæ, the skin being afterward covered with pulverized talc. In excessive sweating of the feet it may be useful to employ the powdered talc, powdered starch, or lycopodium with powdered almonds.

Medicinal Qualities of Nutmegs.—The medicinal qualities of nutmegs are worthy of considerable attention on account of their value in the treatment of diarrhœa, many cases quickly yielding to the administration

of half a drachm in milk. Insomnia may be effectually relieved by them when opium fails and chloral is not advisable. It is also a sedative in delirium tremens, and can be given with safety and marked benefit. An excellent ointment for itching and irritable hæmorrhoids is composed of two drachms of powdered nutmegs, one drachm of tannic acid, and one ounce of lard.—*Medical Bulletin.*

The Ice Bag.—There is no more effective application for an inflamed joint or some head affections than a thin rubber ice bladder, but nothing is more common than to find these bags half-full of air, the ice rolled to one side and the air next the skin. To exclude air from an ice-bag it is best to twist the neck down to the ice and then tighten the string at the top with the neck in this twisted condition. Always place a towel between an ice-bag and the skin.

Cystitis in Women.—The Journal de Médecine de Paris gives the following prescription for cystitis in women:

℞ Citrate of potassium, ½ ounce.
Fluid extract of triticum repens,
Tincture of belladonna, ää 1 ounce.
Fluid extract of buchu, ½ ounce.
Water, a sufficient quantity to make 4 ounces.

A teaspoonful in a wineglassful of water three times a day.

Mixture for Venereal Warts.—M. Ciro Urriola (La Semaine Médicale) recommends a mixture of salicylic acid two parts and acetic acid thirty parts in the treatment of venereal vegetations. The mixture is applied with a fine camel's-hair pencil once or twice daily. Usually but two or three applications are required to cause the greater portion of the vegetations to disappear. The writer claims that the application causes but slight and transitory pain, and that it is preferable to all other treatment.

Irritable Bladder.—

℞ Potassium citrate, ʒ iv.
Fluid ext. triticum repens,
Tinct. hyoscyamus, ää ʒ j.
Fluid ext. buchu, ʒ ss.
Water, sufficient to make ʒ iij.

M. Sig.: One teaspoonful in a wineglassful of water, three or four times daily.

—*Med. Summary.*

For Relief of Asthma.—

℞ Fl. ext. grindeliæ robustæ, ʒ ij.
Potassii iodidi, ʒ ij.
Syr. tolu, q. s. ad., ʒ iv.

M. Sig.—A teaspoonful every three hours.

Medical Progress.

Bladder Difficulties in Old Men.—Whenever an old man complains of frequency or difficulty in micturition, or that he has to get up in the night to pass urine, he should be subjected to careful examination to learn the cause of his trouble, whether a phymosis, small meatus, diminished size of urethra, impacted calculus, enlarged prostate gland, a diseased state of the bladder, a tumor or stone therein, or whatever else may be the probable or possible origin of the disturbance; and regard his kidneys as being in a more than doubtful condition; also do not forget that frequent micturition is often due to the overflow of a greatly distended bladder.

Many of these cases have now begun their "catheter life," during which, unless otherwise relieved, the urine must be withdrawn once or more daily. Consider these people as always in a precarious state, for aside from risk of sudden retention, their kidneys may, at any moment, become badly deranged. These organs may suffer sudden congestion by reason of reflex influences, as in the so-called "urinary" or "catheter" fever; a nephritis, if already present, may become acute, or this disease may now for the first time appear; or, lastly, the renal organs are, sooner or later, liable to that form of suppurative inflammation, from extension of septic processes from below upward, known as "surgical kidney;" which name, rightly interpreted, means the lower urinary tract has too often failed to receive the proper surgical treatment.

Look well to the patients' hygiene. Impress upon them the belief that their lease of life and freedom from complications, will be proportionate to the care they exercise in regard to their daily habits of life. Avoidance of exposure during inclement weather is imperatively demanded; the labor of the kidneys is lessened when the skin is warm, but if unduly chilled, renal congestion and inflammation are very probable consequences, and for this reason the clothing should be sufficient to guard the surface from sudden or prolonged cold. The amount of exercise should be carefully regulated, overwork followed by fatigue with diminution of heat should be avoided, as it is apt to throw an additional burden upon the kidneys.

Keep the bowels regular, using, if need be, some gentle laxative; for a loaded lower bowel tends to congestion of the pelvic viscera, adds to the obstruction, and may cause hæmorrhage from the prostatic venous plexus.

Excesses in eating, and especially the over-use of malt or spirituous beverages, are to be forbidden, because they lead to indigestion, and load the urine with irritating substances, thus intensifying any existing disease, and not infrequently causing sudden retention.

The general health should be maintained, and remedies that give tone to the vesical muscles are often indicated; atony and paralysis of these parts are not seldom the starting point of the trouble, and they always aggravate any other associated disease. The balsamic and stimulating diuretics, and such remedies as disinfect and improve the urinary passages, are often valuable. The patients must be instructed to evacuate the bladder with punctilious regularity at the very onset of any symptom signalizing future danger; provided this act can be accomplished in a natural way, and the organ completely emptied. Straining efforts should be checked as far as possible, and urination rendered easier by a squatting or other advantageous posture, the residue being expelled by gentle pressure upon the perineum with the hand. So soon as micturition *per vias naturales* also ceases satisfactorily to fulfill its purpose, the aid of the catheter must be called in.

When the case assumes a certain gravity, with urination at night, chronic cystitis, decomposing and residual urine, atony of the walls, and a depressed *bas fond*, the patient should be instructed in the introduction of an aseptic soft catheter. Indeed, the sooner the patient is taught how to evacuate the bladder in the evening by this method, the better, for left to itself the disease progresses, and dilatation and sacculation, with destruction of mucous membrane, follow as the forerunners of retention and intra-renal pressure, which are but too often the beginning of the end.

Unless the patient receives timely aid of a curative character, or unless his disease proves not to be amenable thereto, the time finally arrives when we are called upon to alleviate the pains and dangers of a distended bladder. In our laudable desire to feel the satisfaction of having skillfully evacuated this organ, we should not forget that there are some important indications in addition to the mechanical relief afforded by catheterization. Watch closely the condition of the kidneys, and remember that no matter how brilliant one artistic manipulation of the catheter may be, the interests of the patient will be far better subserved by the prevention of evil beyond the reach of surgical art.

Antiseptic precautions are as requisite in this condition as they are elsewhere. When aseptic conditions already exist, antiseptics may seem out of place, and in many cases of sudden retention from hypertrophied prostate or spasm of the urethra, the bladder is comparatively free from disease, and contains an acid urine devoid of pathogenic microbes. Often we cannot be sure as to this, and it is far safer to adopt the antiseptic system in all cases.

This holds with still greater force whenever there is an accidental exposure of raw surface by means of any kind of instrument. Therefore, in order to avoid repetition, I would urge the necessity of always making use of this method whenever we perform any kind of operation on these cases, from the simple introduction of an aseptic catheter to the perfect antiseptic technique of a suprapubic or perineal cystotomy. By so doing we not only save the patient from the dangers incident to septic invasion of these organs, but prevent the still greater one of suppurative nephritis. We should endeavor to prevent, by all possible means, the occurrence of any reflex irritation due to the passage of instruments, which irritation would cause chills, fever, and prostration in proportion to the renal disturbance. Never pass the catheter with the patient standing or in a cold room. Put him in a warm bed, give a dose of quinine or Dover's powder, or bromide with a hot drink, and, if convenient, a warm bath. This, or similar treatment, equalizes the circulation and lessens reflex excitability. Either a hard or soft catheter may be used.

The cautious use of cocaine ought perhaps here to be considered, but if an anæsthetic be necessary or advisable, I would generally prefer pure chloroform, carefully given, as being the safer agent under these circumstances. Obviate the risk of congestion and hæmorrhage, due to sudden relief of pressure, by withdrawing at first, very slowly, only part of the bladder contents, gradually increasing the quantity removed at each subsequent evacuation until the organ can be safely emptied. It is well to replace part of the withdrawn urine by the careful injection of a solution of one of the safe antiseptic agents, like boric acid. This liquid will also serve to flush the urethra, and later on for daily irrigation of the bladder when cystitis is present or probable.

If, after fairly-well conducted efforts with the catheter, failure to reach the bladder ensues, it is wise to abstain from further fruitless attempts, and rather than inflict additional injury, to resort to one of the other means for emptying the viscus, the simplest and best of which is suprapubic aspiration, and which, properly done, is quite safe and

may be repeated a few times with the hope that the relief so obtained will result in restoration of natural micturition, or, at least, in admission, *per urethram*, of the catheter. Should however, these hopes not be realized, and the urine be foul and purulent, with chronic cystitis a marked feature, even this measure should yield to one more effective in establishing drainage, permitting irrigation, and affording physiological rest to the parts. We can then choose either suprapubic or rectal puncture with a curved trocar, leaving the canula *in situ*. Harrison's method of "tunnelling the prostate," or Cock's operation of perineal puncture with a bistoury; either of these would meet with my approval.—Dr. Jas. A. Jackson, in *Medical Record*.

Treatment of Alopecia Areata.—H. Radcliffe Crocker, M. D., F. R. C. S., in the Lancet (London), concludes an article on this subject as follows:

With regard to the treatment, I rely most on blistering the early patches, painting on the liquor epispasticus in three coats, allowing each to dry before the other is applied. At a later stage those parasiticides, which are also powerful stimulants, give the best results in my hands. It is true that such applications fit either theory, but they are none the worse for that. The loose hair round the patches should first be pulled out, and, when practicable, from half to one drachm of chrysarobin to the ounce of lanolin and oil, is one of the best applications; but owing to the erythema it is liable to excite, the indelible staining of linen and the discoloration of the hair, it can only be used in a small proportion of cases. A cleaner and universally applicable remedy, even for the face, is two to five grains of perchloride of mercury, one drachm of rectified spirit of wine, to seven drachms of oil of turpentine. The smaller proportion of perchloride of mercury should first be tried, and the strength increased as the patient can bear it. Of course it produces some burning and stinging of the skin, but this is inevitable in all really efficacious remedies. It should be rubbed in with the finger, not only on, but round the patch, night and morning. Internal medication is not of any use, except in the late stage when the disease is not spreading, but only the dormant vitality of the injured hair follicles requires awakening; then I think pilocarpine may be given with advantage, internally, in the proportion of one-sixth to a quarter of a grain at bed-time, and I find it acts most surely when given in solution. Where circumstances permit, hypodermatic injection of pilocarpine is still more efficacious. One-tenth to one-sixth of a grain may be given. It is not wise, however, to administer it except at the patient's house, as in some subjects it produces vomiting and faintness. Of course, if I find any defect in the patient's health, I endeavor to rectify it, but I do not think it exercises any influence on the course of the affection.

Let me, in conclusion, sum up what I have said in the following propositions: At least four classes of cases are recognizable under the term "alopecia areata:" In the first are universal cases, usually of rapid development, and not necessarily in patches: In the second those with one or more patches in the course of a nerve, or on the site of an injury: In the third those with small atrophically depressed patches, which Neumann called "alopecia circumscripta:" In the fourth those of the common type in patches or bands of irregular distribution, and with characteristic (!) hairs at the border of spreading patches.

The first three classes are undoubtedly of tropho-neurotic origin, and the fourth is parasitic, and forms the largest proportion of the cases. With regard to the fourth class, the preceding facts show: 1. That this form is to a limited extent contagious, and that from time to time limited outbreaks have occurred in small communities: 2. That not only children, but adults who have been in contact with tinea tonsurans, sometimes develop bald patches indistinguishable from alopecia areata: 3. That in tinea tonsurans, commencing in the typical way, the typical crooked stumps may both spontaneously, and under treatment, disappear, and the patches develop into an alopecia areata condition with (!) hairs: 4. That in those countries where tinea tonsurans is most common, alopecia areata is also most frequent: 5. Hence we must conclude that a large proportion of cases in adults which are termed alopecia areata are cases of bad tinea tonsurans, which is acknowledged to exist among children, and that the old authors, from Bateman onwards, were justified in calling it porrigo or tinea decalvans: 6. Finally, I believe that a parasite indistinguishable from the trichophyton tonsurans fungus may be demonstrated in recent cases, and the treatment most efficacious is inunction of powerful and stimulating parasiticides.

The Administration of Nutrient Enemata.—A very bland nutritive enema consists of milk and egg. First peptonize your

milk. Put five grains of the extract of pancreatin with ten grains of the bicarbonate of soda in a gill of cool water, dissolve and mix. Then add milk to one pint and place the bottle or pitcher in another vessel of water as hot as the hand can bear. Leave it there until the milk commences to be bitter. (Where peptonized milk is to be taken by mouth one should usually stop just before bitterness is reached; in feeding by rectum slight bitterness is preferable as it implies a higher degree of digestion.) Next beat an egg and add this to a quantity of milk sufficient for one injection. From four to eight ounces can be usually taken. Now place the cup in a tin or bowl of warm water, so that it will keep a temperature equal to that of the body, until used.

To prepare the patient for a nutritive enema, place her upon her right side, in Sim's position. Place under the hips a hard pillow or cushion from three to six inches thick. It is necessary this should be under the hips only, not in a position to elevate the whole trunk. The rectum and descending colon will thus be made to occupy an inclined plane of which the anus is the highest point.

Have ready a quart of warm water. Salt water is less irritating than fresh. Wash out the bowel with this before injecting your nutritive material. In giving enemata you may use a fountain syringe but much preferable is a baby's stomach tube. This will be furnished with an œsophageal catheter connected with a glass tube and a second rubber tube, finished with a funnel. Having washed your hands, oil the tube and insert it as far as you easily can. Then elevate the funnel and have some one pour in the warm water. As soon as the water commences to penetrate you will find that you can push the catheter up further, until finally you may succeed in inserting it to the entire length. If you wish to avoid movement of the bowels do not introduce more than a cupful of water at a time. While water still stands in the bottom of the funnel quickly depress it and the water will return mixed possibly with fœcal matter. Wash again and again until the water returns clear. Last of all pour in your prepared food and remove the catheter. It is not necessary to press a towel against the anus to secure retention; in fact, by directing attention to the part, this precaution may precipitate the dreaded result. Instead, simply leave the patient in the position in which the enema has been given for a half hour, alleviating her discomfort by pillows between the knees, or in other ways that may suggest themselves to you. If your enema has been bland so that it does not excite colic it will be retained as certainly as water will travel down hill.

A word more about the washing out. Your success here lies in not distending the bowel with too much fluid. You can wash again and again without exciting peristalsis, if only a little water is used. Further, don't make the water too salty and if your patient stands it well, leave the salt altogether out. Unsalted water is more apt to be absorbed and thus relieve thirst. The blood keeps its volume by virtue of its salts. Drinking water is rapidly absorbed by virtue of its freshness.

A word about the tube: Keep it in a solution of soda, when not in use. Keep it as clean as the tube of a baby's bottle. A good deal of your success in rectal feeding will depend upon your exclusion of fermentation germs. Dismiss from your mind the idea that the rectum is a dirty organ and hence not to be treated with respect. Be very careful about the cleanliness of your hands, of the cups and other vessels used, and of the freshness and sweetness of the materials for injection. Let every detail be as perfect as for mouth feeding.

Still another point: Never use glycerin to lubricate your tube, unless you wish to excite peristalsis; and be sure that the oil you use for this purpose is pure. Some bowels will not stand vaselin. Perhaps good olive oil is better borne than any other.—"*Nightingale.*"

Care of Old Age.—The great points are moderate and digestible food, sufficient warmth, and an even, quiet life. The chief of the three is the food, or fuel, for the lamp of life. While all fixed dieting is bad, where it can possibly be avoided, a few hints can be given that may prove of value. The older a person is after fifty, the less food he requires. Luigi Cornaro, who lived to 100, though of a feeble constitution, took twelve ounces of solid food and fourteen ounces of fluid daily during the latter part of his life; and his most severe illness was caused by increasing his allowance, through the continual entreaties of his friends. Very little protein or animal food is required, and though in many respects false teeth are a great boon to the aged, they may lead to too great a consumption of animal food. It is not the amount of coals that we put in a grate that warms the rooms, but the amount that can be burnt, and the great point is to avoid choking the digestive and excretory organs with excess of food. The food of the nursery is the best in old age. Bread and milk and honey is a capital diet. Milk

agrees with nearly all. Fruit is wholesome if ripe or well cooked. Fat is good, as cream or fresh butter. Warm food is very suitable. Soup, enriched with cream or marrow, is light and nourishing. All meals should be regular, and all excesses avoided. Of 800 persons over eighty, sixty per cent. were moderate eaters, thirty per cent. small, and only ten per cent. large. If weight is being gained, the diet should be decreased. In addition to the after-dinner nap as years creep on, a doze after breakfast is often helpful.

As to clothing, it should be both warm and light. Fur is an admirable material. The underclothing should be of wool. A sealskin waistcoat is useful; and the feet and hands should be well and warmly clothed. An eider-down quilt on the bed, which should be warmed in winter, is a good covering. No aged person should be suffered to get cold in bed. Two o'clock A. M. is the hour when most deaths take place, when the temperature of the body is lowest, and its powers feeblest. The warmth of the bed is of great importance in old age. We are all expected to warm our beds, but the old people cannot always do it, so they must be warmed for them. A bath (warm) should be taken every day, and a warmer bath, with plenty of pure mild soap to keep the skin supple and soft, should be used twice a week. It is better for old people, who have the opportunity, to winter in the South of Europe, if possible. If not, the aged should shut themselves up in a well-warmed house at this season. All habits of old people should be respected, and not lightly altered.

Whatever excites exhaustion should be forbidden. Early rising is therefore bad. Drinking hard water is not good, as it tends to hasten the calcareous changes in the body.

Certain common errors in the care of the aged may be here pointed out; some we have already touched on:

1. That the aged require rich and very nourishing diet:

2. That early rising is good for them:

3. That cold baths invigorate them; whereas they are fraught with imminent danger, and are often fatal:

4. That continual medicines and dinner pills are needed to digest the food; whereas, instead, less should be eaten:

5. That the rooms should be hot; whereas they should be cool, but not cold—65° to 70°:

6. That a fixed diet should be rigidly adhered to; whereas variety is often essential.

—*Leisure Hours.*

BRYONIA—AN OLD REMEDY REDIVIVUS.—Dr. Huchard (Revue de Clinique et de Therapeutique, Jan. 7th, 1891) seeks to reintroduce a remedy long known, but almost fallen into desuetude. This is the bryonia, a climbing plant, of the family of the Cucurbitaceæ, very common in hedges; its botanical name is *Bryonia dioica*; it has several other vulgar appellations (white vine, devil's vine, etc.)

The part used in medicine is the root, which is as large as a human arm, looks like a carrot, is fleshy, yellow, marked with rings on the outside, and in the spring filled with a white, irritant and drastic juice. Its taste is acrid and bitter; its active principle is bryonine, which has long been known.

Hippocrates and Dioscorides were acquainted with the purgative and diuretic properties of bryonia.

It is a hydragogue purgative, producing very abundant aqueous stools, in a manner similar to the action of jalap and senna. It is slightly diuretic; in large doses it provokes vomiting.

The homœopaths employ it largely in pneumonia, bronchitis, pleurisy, rheumatism, diphtheria, etc.; to them it represents the medicament for phlegmasia.

M. Huchard recommends its employment in the treatment of whooping-cough, febrile affections, and phlegmasia of the respiratory apparatus. He advises that the bryonia be given in the form of powder in the daily dose of 50. centigrammes to 4. grammes; or in the form of decoction (8. grammes per litre of water) one to two cups daily; or in the form of tincture prepared in accordance with the ordinary proportions of the Codex, daily dose 2. to 5. grammes; or in the form of wine (50 grammes per litre of Grenaché wine) 30. to 60 grammes to be taken in order to obtain a purgative effect.

In certain countries the peasants hollow out the root into the form of a tumbler and fill the cavity with beer, which they then drink as a purgative.

At times M. Huchard combines the tincture of drosera with that of bryonia in the treatment of whooping-cough; he then prescribes a daily potion, containing 2. to 5. grammes of tincture of drosera and 1. to 2. grammes tincture of bryonia.

We may add that Dr. Petresco, of Roumania, has recently commended bryonia as a hæmostatic in the treatment of hæmoptyses, hæmatemeses, metrorrhagias and hæmorrhages *post partum*. He administers every half hour a cup of an infusion of the root of this plant.

M. Cazenave de la Roche regrets, with M.

Huchard, that the bryonia has been abandoned by medical men, inasmuch as it possesses a remarkable elective action on the serous membranes, and as, on account of the substitutive hyperæmia which it produces, it may be employed with success in the treatment of phlegmasias of the splanchnic and articulary serous membranes, also in rheumatismal or rheumatoidal affections.

Bryonine is very active; in large doses it is even toxic. The dose of 1. to 2. centigrammes ought not to be exceeded. Up to the present time it has been little used.

Urticaria in the Periods of Infancy and Childhood.*—This disease—of which Fox has studied more than several hundred cases, is not very explicitly treated of in the dermatological text-books. On account of the variety of forms under which it appears in infants and children, it has been variously named. In truth, however, we are dealing with a real urticaria, which displays certain peculiarities only when occurring in children. These peculiarities are characterized by the appearance in the centre of the wheal of an inflammatory point which soon assumes the form of a papule, which continues to exist long after the former has disappeared. If the inflammatory process has gone a little further, the papules may be superseded by small vesicles or pustules. The former are frequently found on the hands and feet, topping the wheals and filled with clear fluid; oftener they are situated immediately on the skin. The pustular form is of not infrequent occurrence and gives rise to suspicion of varicella or scabies. The eruption is at times universal; again is limited to certain parts of the body. It may appear on the scalp, the face, or on the palmar and plantar surfaces, but as a rule avoids the flexures of the larger joints. Urticaria seems to occur with equal frequency in both males and females, usually beginning in the first and second years, and may be found as late as the eighth year. Most cases come under observation during the summer months, the disease diminishing in winter, only to break out with renewed intensity the following spring; and in this way it often extends over a period of years. Fox has never observed that prurigo inter-curred as a complication. He has often seen a concurrence of measles, scarlatina, and varicella, though without having any direct connection with the previously existing urticaria as far as concerns its influence upon the general condition of health. The affection is evidently based upon hyper-sensitiveness of the skin or a disturbance of the equilibrium of the vaso-motor system, in consequence of which the bites of insects, and yet less active external causes, such as accelerated circulation, mental or psycological excitement, etc., or internal causes; particularly in gastro-intestinal irritation, the aforementioned eruptions make their appearance. They occur most frequently at night, robbing the patients of sleep, in this way interferring with nutrition and causing their general health to fail. Therapeutically, therefore, we must seek to correct constitutional anomalies, and diseases of the digestive tract; avoid as much as possible external irritation; promote sleep by the judicious exhibition of proper soporifics; and so on. Locally, Fox advises the application of the ointment of ammoniated mercury, mitigated according to circumstances, if the eruption is pustular in character. The papular variety will do better with a week solution of liquor plumbi subacetatis. Baths are, as a rule, not very well tolerated.

* J. Fox, in Monatsschr. fur Pract. Dermatol. X. No. 12, XI. No. 1.

Value of the Subcutaneous Administration of Gold and Manganese in the Treatment of Tuberculosis.—J. Blake White, M. D., publishes a paper on this topic which he read before the New York Academy of Medicine, and was reported in the Medical Record, March 21st. His conclusions, from the results obtained, are that the effect of the use of gold and manganese, was marked improvement in several cases. He says: The cases treated at the hospital were not selected, but subjected to treatment as they presented and expressed a desire to receive the injections. All were very much reduced physically, and manifested extensive pulmonary lesions. The nutrition uniformly improved—in some of the cases the expectoration was remarkably decreased; in one the amount was lessened from fourteen ounces to one ounce in twenty-four hours, though at first it was slightly increased. The rapid gain in body weight in several instances was remarkable, following improvement in the appetite and the functions of digestion and assimilation.

The improvement in the respiration does not appear so readily as the other indications of benefit, though cough and expectoration are soon lessened; fewer râles and less pronounced dullness over affected areas are evidences of amelioration which are not long to supervene.

In some of the cases a very pronounced

reaction followed the injections, but it is desirable to avoid such effects as far as possible by moderate doses, for I believe the best therapeutic effects are assured when little or no very decided reaction is manifested.

Two private cases, both incipient pulmonary tuberculosis, were not confined to the house during treatment, but attended to their daily avocations without any inconvenience. The general amelioration was prompt. Cough, expectoration, and throat irritation were entirely relieved after six injections in one case and eight in the other. Both immediately began to experience better appetites, and rapidly gained in body weight. This is the class of cases in which the most decided beneficial effects from the treatment may be expected.

Before these patients were subjected to this method of treatment, inhalations, sprays, etc., were tried for some time without effecting such relief of the throat irritation and cough, which, in so short a time, yielded to the hypodermatic injections. I have many private patients under treatment progressing equally as well as those cited.

I may say that in my practice of over five hundred injections, there has neither resulted an abscess, nor even a trace of inflammation of the skin about the seat of the punctures.

Indications in the Treatment of Simple Fistulæ.—The chief indication in patients otherwise healthy, is to destroy the accidental tissue which lines their internal surface, which, when accomplished, modifies the condition of their parietes, and, together with enlarging the orifices of the passages, and complete drainage, decidedly favors granulation, cicatrization, obliteration, and cure. This may be effected by means of various escharotics, some in the form of fluids, as injections, and others in the solid form. Some of the fluids which have been successfully used in such cases, by the writer as well as others, are the strong tincture of iodine; a strong solution of nitrate of silver, say one drachm of the salt to one ounce of distilled water, and the following: Acidi carbolici, gr. xxv.; glycerin, ʒ ij.; aquæ destillat, ʒ iv. A number of other escharotic solutions will suggest themselves to practitioners generally.

I have successfully treated quite a number of cases of simple and superficial anal and rectal fistulæ, in which there existed one or more straight or slightly curved fistulous tracks, by means of probes of silver or copper, eight inches long, and of different sizes. The silver probe may be coated with the nitrate of silver, by dipping it several times in the fused salt, and introducing the whole length to the tract; or the copper probe may be coated with the nitrate of copper by dipping it in nitric acid, and introduced like the former. A choice can thus be had between the nitrate of silver and the nitrate of copper; I have had most success with the latter.—The former was the suggestion of Sir Benjamin C. Brodie, and the latter of Mr. Evans, of London. When a silver and a copper probe are dipped in nitric acid, and introduced together into a fistulous passage, the caustic effect is greatly increased, and if suffered to remain in too long would destroy the tissues with which they were in contact. This is the effect of the Galvanic action set up by the contact of the copper and silver probes with the acid acting upon them.—Dr. Wm. Bodenhamer in *Medical Record.*

Hot Water Bags.—As a profession we do not sufficiently appreciate hot water bags. The amount of comfort contained in one of these conveniencies cannot be imagined unless one has been the victim of pain and suffering, and been made to realize it by actual experience. There should be, if possible, during a sick spell, at least a half-dozen various sized bags in the sick room, easy of access and ready for use. They are alike available for the application of hot water, if such is required, or the extreme cold or ice water. In cases of high fever, where it is desirable to reduce the temperature by the direct application of cold water, these bags serve admirably, and placed along the spine and the base of the brain and around the head itself, they have a wonderfully cooling and soothing effect upon the victim of fever or inflammation. The bags, that are made for use about the head, are composed of a softer, smoother, more delicate kind of rubber. They may be filled with ice, crushed very fine, and the bag, being half filled, will readily accommodate itself to the inequalities of the surfaces. Once, going ten miles into the country and happening to carry one of these little bags, I brought it in immediate requisition upon a patient with a temperature of 106, whose head was rioting in pain; before I left the house he stated he would not take $10,000 for the relief produced by the simple India-rubber bag, half filled with crushed ice. The great advantage of these bags over wet cloths is they can be removed easily while the patient is sleeping, whether it be the case of an infant or adult.—*Medical Mirror.*

THERAPEUTIC USE OF MONESIA BARK.—The so-called "monesia bark" (*Cortex monesiæ*, or *cortex Buranham* or *Guaranham*) is derived chiefly from a Brazilian tree *Chrysophyllum glycyphlæum Casaretti*, but also from other six varieties of the species *Chrysophyllum*, belonging to the natural family *Sapotaceæ*. According to Henry and Payen, the bark contains saponin, an allied body "monesin," tannic acid, glycyrrhizin, wax, a crystalline fatty substance, etc. Years ago the drug (in the shape of a solid aqueous extract, termed simply "monesia") was much vaunted and used, especially in France, as a tonic and astringent. Subsequently, however, it gradually fell into oblivion. Quite recently, Dr. Pavel G. Rozanoff, of Moscow, has once more drawn the attention of the profession to the long-forgotten remedy (Moscow Inaugural Dissertation, 1890), emphatically pointing out that monesia actutally affords an excellent expectorant and astringent agent. He describes a number of cases of respiratory and intestinal affections (acute and chronic bronchitis, pneumonia, subacute enteritis, chronic diarrhœas, etc.), in which he most successfully resorted to the internal administration of a mixture, made of from ½ to 1 drachm of aqueous extract of the bark to 6 ounces of water. The mixture was always given in tablespoonful doses, repeated every two hours. The author's experience seems to justify the following general propositions: 1. The bark affords a good expectorant, which is dependent upon its containing saponin and monesia: 2. At the same time, owing to a rich proportion of tannin, the remedy constitutes a good astringent: 3. It is quite free from any unpleasant accessory effects and hence, as an expectorant, should be preferred to ipecacuanha, senega and such like drugs. It is especially indicated in cases of respiratory disease in which a more or less prolonged administration of an expectorant is deemed necessary, as well as in cases where the ordinary expectorants are apt to give rise to gastro-intestinal disturbances: 4. As an astringent monesia proves to be useful in chronic diarrhœa: 5. In virtue of its simultaneously possessing expectorant and astringent properties, the bark will be found eminently beneficial and convenient in cases of co-existing chronic catarrhal affections of the respiratory and intestinal tracts.—*Philadelphia Med. and Surg. Reporter.*

AN EASY METHOD OF FEEDING PER RECTUM.—Mr. Y. M. Jones-Humphreys, L.S.A., writes (Lancet, February 14th, 1891): Some months ago, having to treat a bad case of gastric ulcer by rectal feeding, etc., I devised an apparatus consisting of a small funnel, a piece of elastic tubing ½ inch in diameter, 1½ feet long, about 4 inches of glass tubing (by which the descending fluid can be watched), and joined on to this an ordinary flexible catheter. The atmospheric pressure is sufficient to send any fluid into the rectum, and I have never noticed any return of the fluid, absorption being slow but efficient. The instrument is an improvement on the old enema apparatus in use. The claims for this method are: (1) It is extremely simple, the patient being able to pass the catheter into the bowel without experiencing any pain or unpleasantness: (2) It is cheap and easily made: (3) After once being shown, the most inexperienced person can use it, and thus we can be sure our patient will have small quantities of nourishment at frequent intervals: (4) The fluid is slow in its passage, and thus nearly the whole quantity becomes slowly absorbed. In any case requiring rectal feeding, I venture to hope that my professional brethren will find this simple method of use to them, and a source of comfort to their patients.—*Hospital Gazette.*

DIRECT APPLICATION OF "TUBERCULIN" TO PULMONARY CAVITIES.—In a lecture delivered at Halle on February 18th, and published in the Münchener Mèdicinische Wochenschrift, No. 8, 1891, Dr. Edmund Leser gives full details of two interesting cases in which he cut down upon, and laid open and emptied, large pulmonary cavities of tuberculous origin, with the object of treating the diseased portion of lung by the direct application of Koch's fluid. In each case the cavity was near the apex of the lung. Both patients were adults. The results of the operation itself proved very satisfactory, and up to the date of the delivery of the lecture, the patients, it is stated, had improved very much. In the first case, a one-per-cent. solution of Koch's fluid was applied to the inner wall of the exposed cavity by means of a brush. In the second case, solutions of increasing strength were injected three times into the cavity. In both instances the application of the fluid was followed by well-marked febrile reaction, together with dyspnœa, pain in the affected region of the lung and aggravation of the cough. There was also considerable increase in the amount of fluid secreted from the walls of the cavities.

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Original Articles.

EPIDEMIC OF DENGUE AT SMYRNA IN 1889.*

BY DR. MILTON CRENDIROPOULOS.

Dengue, or "break bone fever," made its first appearance in Smyrna toward the end of the month of June, and did not relax its ravages until the end of the month of October in the same year. It began in the Hebrew quarter, to which it remained confined during almost a month; thence it radiated from place to place, penetrating the different quarters of the city in such manner that toward the end of September all Smyrna was infected. Four-fifths of the population paid tribute to the epidemic, which proved of special severity.

Unhappily, no investigation has been made in order to elucidate its importation; the authorities voluntarily ignored it, hence private individuals, assured beforehand that insurmountable difficulties would arise, undertook none. Of all the theories circulated, two alone I believe are worthy of mention: One, that the malady was imported by a Jewish family coming from Beyrouth; the other, that it was propagated by carloads of rags shipped from the Isle of Cyprus.

For the sake of convenience, I distinguish three forms of dengue: The grave; the moderate, and; the mild. I begin with the moderate form, taking it as the general type:

Moderate Form:—After a painful lassitude of from twenty-four to thirty-six hours, the patient is seized with slight chills, frequently repeated, with frontal cephalalgia, and with severe pains in the limbs, the loins, the nape of the neck, the joints; at the same time the temperature rises to 102.2° F., at times to 104.° The face becomes flushed; the eyelids dilated, the conjunctiva congested, and eyes filled with tears; the tongue thick and saburral, with a bad taste in the mouth; the skin dry and rough. The patient speedily becomes prostrated. In most cases I have observed excessive polyuria ensuing after the first twenty-four hours of the malady.

Two days later the fever sinks notably; (the pains in a great measure disappearing), a mild eruption, generally in the character of a rose rash, making its appearance on the different parts of the body, when everything seems to resume its accustomed course. On the 5th or 7th day, the temperature suddenly remounts and the pains reappear; gastric embarrassment becomes pronounced and vomiting,insomnia, and various hæmorrhages are added to the tableau. Then follows a secondary eruption more pronounced, more confluent, accompanied with an abundant diaphoresis, and this eruption in turn followed by a long and painful convalescence. Very frequently we encounter several growths of exanthema during the time of this supposed convalescence. It is also to be remarked, that the patient exhales a strong odor, *sui generis*, which might be compared to that of the deer.

Grave Form.—In this form, the chills were violent, and the temperature rose in several hours to 104° and 105.8.° The nervous phenomena were intense; the præcordial anxiety, dyspnœa, delirium, and hæmorrhages, seldom absent; the vertigoes were violent; convalescence long; and, complication frequent.

Mild Forms:—In these, the patient gave evidence of fatigue in the limbs; slight pains distributed throughout the body; heaviness of the head; inappetency, and incapacity for labor; all accompanied by a degree of fever which lasted from one to three days. The eruption then appeared, at times mild and scarcely perceptible, at times confluent, and the individual, after several days of convalescence, enjoyed a return of health without having been obliged to interrupt for a moment his attention to business.

Abnormal Forms:—Besides these three types, there were others of rarer occurrence,

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which were distinguished by their evolution; by the duration of each period, and; by several symptoms which were absent in the ordinary form. Thus, several times, the fever continued after the two eruptions for the space of a month and fifteen days, assuming the form of the remittent or continuous type; at other times, a considerable hyperthermia succeeded the febrile period. In the following, like instances were encountered; but the most frequent anomaly lay in the tardiness of one of the two eruptions—the eruption would not appear at the proper time; the *malaise* accordingly continued; the febrile movement, occurring toward evening, would yield to no therapeutic measure; the nervous phenomena were pronounced; prostration was great—there was delirium, comatose condition, cutaneous hyperæsthesia, cyanosis; and all these symptoms, sometimes grave, but always clamorous, would give way only on the day when the eruption appeared.

Case I.—Mlle. Av., 23 years old, without profession, of a nervous constitution, attacked from time to time by nephritic colic; seized on the night of the 27th or 28th of August, after two days of *malaise*, with chills, polyuria, pain in the head and kidneys. The following day, my first visit, found the patient in bed. Her eyes were congested and tearful, her body red and bloated. The chills had ceased, but the pains, especially in the loins and calves of the legs, continued insupportable—so severe as to cause her to toss and roll in bed. Tongue thick, saburral; constipation; prostration. Axillary temperature, 103°; pulse, 110. Two powders of analgesin, containing one gramme each, ordered taken every two hours.

Aug. 29th. Amelioration. Axillary temperature, 101°. Pains diminished.

Aug. 30th. Erythematous exanthem on the face and hands; feebleness, pruritus, prickling, anorexia, prostration. On the 1st of September, obliged to leave her bed to take care of her mother, who fell ill the day before.

Sept. 3d. Severe pains in the head and loins; very great prostration. Temperature, 103.5°; pulse, 115. Two grammes of analgesin.

Sept. 4th. Same condition. Severe epistaxis. Same treatment.

Sept. 5th. Excruciating pains in the legs; lypothymia; cold of the extremities; cutaneous surface extremely hyperæsthetic; pupils contracted; lips cyanosed. An injection of one centigramme of morphine calmed her for several hours. Toward 6 o'clock in the evening lypothymia again, followed by other symptoms; vomiting, præcordial anxiety, epistaxis. No albumen in urine. Another injection of morphine. During the night insomnia, dyspnœa. Three grammes of bromide of potassium did not calm her.

Sept. 6th. Same condition; lypothymia recurring more frequently. The temperature oscillated during these three days between 103° and 105°. In the evening, all the symptoms subsided; the fever fell to 104.5°, and a slight exanthem appeared on the face. Night comparatively good.

Sept. 7th. The exanthem became confluent, scarlatinous, and extended to the face, the breast, the hands and the throat; amelioration of the general condition.

Sept. 8th-9th. The improvement continued; scurfy desquamation; pruritus.

Sept. 11th. The patient began to convalesce.

Case II.—Michael C., cloth merchant, 35 years old, visited him for the first time on October 12th. On the 2d of the same month he began to feel slight chills, pains in the neck and calves, and fever; bitter taste in the mouth, eyes tearful, and, in general, presented the characteristic tableau of dengue fever. Four days later, his condition having improved, he began to attend to business when, on the tenth day, he experienced painful lassitude, vertigo, chills, a hoarse cough with white spumous expectoration, intercostal pains on the right side, and hoarseness of the voice. Axillary temperature, 101.5° in the evening. On percussion, submatitis of the right base, which extended as far as the angle of the scapula; on the left side, tympanism; on auscultation, sub-crepitant râles with murmurs; broncophonia on the left. On the right side, granulated respiration with hissing sounds. Wet cups, syrup of opium and ipecac.

On the 13th of October the pulmonary phenomena were improved, but the feebleness, insomnia and anorexia persisted. The temperature, which was 100° in the morning, remounted to 102.5° in the evening, and this condition of the patient, amenable to no remedy, continued until the 25th of October when it became aggravated. The thermometer rose to 104°; to the insomnia were added præcordial anxiety and dyspnœa; to the anorexia, vomiting. Bromide of potassium ordered. On the 20th of October a roseolic exanthem made its appearance. On the 2d of November there was still exanthem, but there was no further trace of the other symptoms.

I give another observation, in which the premonitory eruption required 24 hours to make its appearance.

Case III.—Jean G., merchant, 76 years old, an atheromatous and bronchitic diabetic; experienced during the night of the 10th of August, without premonitory symptoms, an intense chill, accompanied with cephalalgia and pain in the loins and joints.

The next day, August 11th, I observed slight fever—101.5°; the pulse beat strongly, 70 pulsations a minute. The tongue was coated, the eyes red, the body bloated. The patient gave evidence of shooting pains in the epigastrium. Temperature in the evening, 102.2°.

Aug. 12th. Headache persisted, but the other pains had partially yielded to salicylate of soda. The inappetency was complete; the prostration continued. Everything that the patient tasted was bitter, even water, had a nauseating odor. Retching, at times mucous vomitings. Morning temperature, 100.5°; evening, 102.5°.

This condition persisted, with several transient remissions of the fever, occasional amelioration, alternating with aggravation of the general condition, until Sept. 3d—the day when the patient felt a prickling on the chest, under which we discovered a mild roseolic exanthem which extended as far as the abdomen.

On the 8th of September, after a renewed elevation of temperature, followed by vomiting and præcordial anxiety, the patient presented a second and final eruption, more marked in character, and then entered upon an excessively long convalescence.

Inoculation-beginning: The inoculation of dengue requires from one to three days. The first evidence of the malady is lassitude, more or less pronounced, chills, cephalalgia and vertigo. At other times, pains in the legs would first appear, lumbago and pains in the neck. In three cases I saw the dengue begin with very severe gastralgia, in persons who were subject to it, and often by vomiting and diarrhœa, which would suddenly interrupt the sleep of the patient, especially after an excess of food. Several times the first spmptom was a catarrhal angina or a mild bronchitis, to which one would have been justified in attributing the *malaise* and the fever, had not other clamorous symptoms on the following day revealed the true cause.

Symptoms.—Chills were mild, often repeated, and occurred in general, on the first day. The patient complained of them as following the slightest movement which he might make in bed. They were followed by a feeling of heat, which lasted several minutes. In several cases, there was only a slight chill, tolerably prolonged; its repetition at stated intervals indicated a malarial complication.

Fever.—The cases of dengue, in which fever was completely absent, were very rare. I recall but one instance, of a young lady of 24, with whom the pains in the head and loins, the polyuria, the bilious incoercible vomitings, the lypothymia, and the roseolic eruption on the breast and neck, appeared four days after the beginning of the disease. In her case the thermometer scarcely reached 100 the day preceding the eruption.

The fever was continual; it oscillated between 101.2 and 104°, rarely passing beyond the latter point. It attained its maximum, gradually, after the lapse of from 12 to 24 hours, according to the gravity of the malady. Once arrived at that point, it remained stationary for two or three days, presenting very mild matutinal remissions; then it gradually declined to the point of complete, or nearly complete, defervescence. This apyrexia, which took place at the moment of the premonitory eruption, was transient, for after two or three days the temperature remounted suddenly to a point beyond the maximum of the first thermic elevation, returning to the normal at the moment of the secondary eruption.

During the first days of convalescence, I several times saw the temperature descend and maintain itself below the normal. The following is a good example of hypothermia, which I witnessed in company with my father:

Case 4.—S. C., 68 years, merchant, of delicate health, tuberculosis in the family; fell sick on the 8th of October, presenting all the symptoms of regular dengue. Chills, polyuria, mild bronchitis, pains in the head and neck, in the knees, etc. The next day, temperature 102°.

October 10th it began to sink gradually until the 12th, when it decreased to 100°.

On the evening of the 13th dyspnœa, nervous excitation, laughter, tears, præcordial anxiety, some sanguineous expectoration, thermic elevation to 103.2°.

October 14th.—Dotted eruption on the chest, the abdomen and the buccal mucous membrane. Temperature 100.6°.

October 15th.—Considerable prostration, profound somnolence, respiration slow and noisy; on speaking to the patient, he would open his eyes only to close them at once, responding by a groan. Temperature, 94°; pulse feeble, scarcely perceptible, and slow; in the evening, the same condition. Temperature, 96°; pulse, 46.

October 16th.—The temperature begins to mount gradually; morning, 96.5°; evening, 97.5°. In proportion as the temperature rose, the general condition improved, and it was only on the 17th of October that the temperature reached the normal, and the patient could sit up in bed and take a cup of bouillon; the pulse remounted to 65. Was the return to the normal, so soon accomplished, due to the transient effects of the malady, or to the subcutaneous injections of testicular liquid of the rabbit which was employed? I cannot tell. At all events, convalescence, which was quite brief, proceeded without further accident.

Pulse.—The pulse-beat varied ordinarily from 80 to 120; it was in proportion to the temperature and followed the latter's course. It relaxed during the first days of convalescence, becoming feeble and depressed.

Pains.—Cephalalgia was almost never absent; it was seated at the points from which the supra-orbital nerves emerge, was of a dull character, and sensitive to the slightest pressure. The temporal pulse beat strong; the eyes were heavy, as though forcibly compressed by strong and continued pressure, tearful, red, and incapable of suffering the light.

Next to the cephalalgia, the most frequent pains were in the members, especially the lower limbs. In the latter, the pain was situated in the muscular mass of the calf, having its maximum in the upper part near to the popliteal space; the ligaments of the knee were not exempt, but the joint itself was insensible when the head of the tibia was rubbed against the femur, and it was only on extension and flexion that the pain returned. The internal muscles of the thigh, the ligaments of the tibio-tarsial joint, and the tendon Achillis added their part to the sufferings. In the upper members was often observed pain in the wrist, the muscles, the arm, and the shoulder.

Also the patient experienced a heaviness (an excessive fatigue) in the loins, as if the entire muscular mass had been severely beaten; or shooting pains which recurred at every moment and which the least pressure could provoke. The muscles of the costo-vertebral groove were often very sensitive. The pain in the nape of the neck forced the patient to hold the head immobile; and that seated in the muscles of the abdomen and thorax prevented him from attempting the least effort, even that of a deep breath.

All these pains rendered the position of the patient insupportable; they robbed him of sleep, and tormented him unceasingly. He writhed in bed, extended and bent his legs, changed his position every moment without relief. Several times there was such a predominance of the pains over the other symptoms, that all our therapy was directed against them; and when they disappeared after two or three days (in the most favorable cases), they left the patient fatigued, exhausted, broken down.

Gastric Trouble.—This was constant in the actual epidemic.—I have at times seen dengue begin by an attack of indigestion. In appetency was marked from the beginning of the malady; there was a bad taste in the mouth; the patient had no relish for any food, and took nourishment with insurmountable repugnance, if not with difficulty; in most cases the thirst was ardent. Desire to smoke had completely disappeared, even with great smokers; the breath was fœtid; the tongue, at the outset thick retaining the imprint of the teeth, became later coated with a thick whitish, and at times brownish fur; the edges were red. Nausea and bilious vomiting — more rarely mucous in character—almost invariably occurred, especially at the moment of the secondary eruption; occasionally these latter were incoercible. The epigastrium became the seat of severe pain or smarting; cramps of the stomach were habitual; the abdomen, often filled with gases, was tormented by rumblings and colic. Obstinate constipation was the rule. Diarrhœa, which was very rare at the beginning of the malady, occurred more frequently toward the end of convalescence, and then it succeeded to the constipation. Hypertrophy of the liver was very rare, say

when due to a malarial factor. The spleen was very often engorged.

Angina, at the beginning, was not excessively frequent; it was almost regular during the eruption. The soft palate and pharynx were red, the tonsils tumefied, and deglutition difficult. The throat was often the seat of an eruption, which assumed an aphthous appearance. Tumefaction of the sub-maxillary glands was not rare.

Respiratory Apparatus.—The pulmonary manifestations, which I purposely place amongst the complications, were of two kinds: Those which appeared at the beginning of the malady, and those which accompanied the eruptions. The first consisted generally in simple congestion of the lungs. On percussion we at times discovered submatitis; at times tympanismus. On auscultation, we found respiration harsh, pureile or granulous. At other times, we found hissing sounds, bronchial whistling with broncophonia, prevailing throughout both lungs. The patient had a dry cough without expectoration, or expectorated little, and then the discharge was mucous, white, spumous. All these symptoms exchanged continually gave way to one another; they were exchanged, or else disappared, soon again to manifest themselves. This congestion, at the end of two or three days, yielded to the proper treatment, often of its own accord.

A characteristic bronchitis often accompanied the eruption; a bronchitis with very moist cough, with green expectoration adhering to the receptacle, at times sanguineous, and with râles, rumbling and sub-crepitant. This bronchitis lasted during a great part of the convalescence. I have never encountered either pleurisy or pericarditis.

Hæmorrhages.—The hæmorrhagic was the almost constant form of the epidemic which I have just described. These repeated hæmorrhages had the common feature of preceding by several hours the eruption. In three cases, in which I observed epistaxis to intervene at the beginning of a very mild scarlet fever, the eruption appeared the next day. They were at times so abundant as to disquiet, with reason, both the family and the physician, and consisted (in their order of frequency) in epistaxis, metrorrhagia, hæmoptysis, general hæmorrhage, hæmatemeses, mœlena, and hæmaturia. One individual, with whom the exanthema required 22 days to appear, presented six hours before the eruption, an abundant hæmorrhage proceeding from a wound in the external face of the wrist, which involved a minor vein. It is to be observed that the cicatrization of this small wound, produced during the malady by a fall upon broken tiles, and which until then had bled but little, was not consummated until after the eruption.

The metrorrhagias, frequent in women suffering from uterine disorders, consisted, for the most part, in several drops of blood, and occurred at the approach of the menses; at times, however, they were tolerably abundant. My friend and confrère, Dr. Yovanoff, observed an extraordinary fœtidness in the vaginal flow.

Eruption.—Scarlet fever is an eruptive malady. Exanthem was rarely absent. In my experience it was encountered in three-tenths of the cases, though at times it was necessary to exercise great perseverance in order to discover it. This was due to the fact, on the one hand, that there was no precise point of predilection, on which it was localized, and, on the other, that it assumed the most diverse forms, from simple erythema to vesicules. Despite this polymorphia, the eruption maintained an essential character, appearing in the form of slight elevations accompanied with the different symptoms, several of which have been described. Multiplicity was the rule in the actual epidemic. Ordinarily, the outbursts did not exceed two in number; I had frequently occasion to notice several, but in the mild forms a single one often greeted the eyes of the physician or the patient. The exanthem, I have said, despite a certain tendency to appear on the back of the hand and foot, showed a preference for no single part of the body; the face was attacked as well as the neck, breast, and abdomen. At times the entire body was covered by the eruption.

Premonitory Eruption.—This was mild and lasted from several hours to two days. It presented all the characteristics of a simple erythema, or it consisted of small spots of a bright red, with irregular edges passing beyond the cutaneous surface and disappear-

ng under pressure. The mucous membranes were not spared; the palpebral conjunctiva became red; the gums, the soft palate, the pharynx were covered with a diffuse redness whose irregularities were contrasted with the rest of the mucous surfaces of a paler color. The nasal, lachrymal and salivary secretions were exaggerated. At times, on the gums and buccal mucous surfaces, the eruption presented an aphthous aspect.

Secondary Eruption.—This was the most profuse, the most tenacious and the most varied. It was accompanied by various symptoms, which happily were rarely followed by grave consequences. Its duration varied from two to four days; its forms were numerous. At times it consisted of a simple erythem, at times (and more frequently) in rosealic, confluent spots. At other times it was a red, dotted eruption similar to that of measles, the papillæ of different dimensions. In three cases we saw vesicules with inflammatory aureole, the white apex of which became umbilicated and then dried up, forming a scab. Very often, also, the exanthem assumed the aspect of deep red spots, quite analogous to flea-bites. When the roseolic eruption is confluent it resembles, to the point of confusion, the scarlatinous eruption, with the difference that toward the edge the spots are more separated and consequently more distinct. This sole characteristic permits a differentiation of the two eruptions.

I never encountered either purpura or urticaria, but did observe the polymorphia of the exanthem in some of the outbursts. Thus in my experience, even beside the vesicules, I could see the red points which may be compared to flea-bites. The intensity as well as the form of the eruption, were not increased with the gravity of the malady. The other eruptions differed only slightly from the preceding; the fever and the nervous phenomena were absent and their confluence tended toward diminution. It may be said that the eruptions in multiplying, lost their force.

Desquamation.—To the eruption succeeded a furfuraceous desquamation, which was accompanied with prickling and insupportable itching when generalized. It did not last more than twenty-four hours, hence, was effected without any disagreeable consequences for the patient.

Urine.—It presented the characteristics of febrile urine; it was meagre in quantity, of a dark color, and charged with urates. It was not rare to encounter bile in sufficient quantity to impart a greenish color. Albumen was relatively rare and transitory.

Nervous Phenomena.—Amongst these phenomena may be noted, incoerceable vomitings, lypothymia, insomnia, agitation during sleep, præcordial anxiety, dyspepsia, palpitation, causeless tears and laughter. With nervous persons, or when the fever was severe, there was delirium, at times slight and at times wild, assuming for the most part the form of persecution. The patients would see persons who maltreated them; they believed their houses were collapsing, and fled to escape certain death. With drinkers, serpents and other animals pursued them. At other times the delirium was calmer; the patient pitied his own fate; he believed his condition dangerous, and wept hot tears: others took their medicine and even their nourishment with a certain distrust. The dreams were of the same order—precipices, massacres, combats, and every kind of nightmare, causing the patient to awake with a start, and leaving him a prey to extreme agitation. The initial polyuria should be reported in the same order of phenomena. But that which was ever present, and characteristic, was the great prostration into which the subjects were plunged. The glance was fixed, immobile, without any expression; perception slow, and response tardy. The patient had a stunned or stupefied air. This lasted for several days, and persisted even during convalescence. I frequently observed perversion of taste and smell.

Convalescence.—This was so long and painful, that I consider it as a stage of the malady. Says Dr. de Brun in an excellent treatise on this same subject: "I know of no single affection, whatever its gravity, which for so short a duration can produce a like debility."

The patients, in throwing off the malady, were not altogether liberated from their aversion to food, or from their vertigo and prostration. The pains disappeared in great part, but the feeling of extreme fatigue in

the limbs persisted. To the perversion of taste and smell, to the gastric trouble, and to the fœtidness of the breath, were added cramps provoked by walking, somnolence, incapacity for all manual labor, feebleness of memory, and apathy of the genital organs. As already noted, bronchitis, when present, persisted for a long time after the secondary eruption.

In scarlet fever, the eruption appearing in the form of a slight elevation, it was very frequent to see the exanthem appear several times while the symptoms of convalescence were well established. My father has observed a fourth and final exanthem twenty-five days after the beginning of the dengue, an exanthem which marked the end of convalescence; similar instances abound in the history of the actual epidemic. No one has ever observed, however, to my knowledge, in an eruptive fever—and the dengue may be considered as such—a continuation of the eruption after the malady.

On the other hand, if we consider only the symptoms, it is seen that there are characteristics of the affection itself which persist during convalescence; hence the prostration, the vertigo, the gastric trouble, etc. The fever itself, and the vomiting, may continue for many days without being susceptible of any explanation by the intervention of another pathogenic agent or any other complication.

The following is the synopsis of an observation of a case which I treated for fever persisting a long time after the dengue:

Case 5.—Mlle. A. B., 16 years old; delicate in appearance; without hereditary or personal antecedents; fell sick from dengue on the 14th of August. August 16th roseolic eruption and fall of temperature. August 19th, fever 104°; vomiting; epistaxis. August 20th–22d, roseolic confluent eruption; temperature 100.4°–102.2°.

From that time the temperature continued to oscillate between these limits, with slight exacerbation in the evening; anorexia; perspiration; dry cough; vomiting, insomnia. In the region of the lungs I distinguished several disseminated râles; tongue saburral; constipation.

Sept. 26th: temperature began to fall and the condition of the patient to improve until the 5th of October, when she was completely cured.

Dr. Yovanoff cites three examples of a fever which lasted quite a while after the dengue, without the presence of any complication to explain it.

In accordance with the preceding, the duration of the malady varied from three weeks to a month, in the moderate cases, which were also the most frequent. The termination was not sudden. The appetite returned by degrees; the prostration diminished little by little, and the difficulty disappeared after the lapse of some time. Generally a severe diarrhœa indicated the end of the malady. The prognosis in respect to mortality was favorable, but on the other hand the dengue left behind a host of affections which did not desist from tormenting those whom it had attacked. Renewed attacks have been rare. I know of only two cases which have been repeated a month and fifteen days after the first attack. As to relapses, without making definite statements, I believe that they were abnormal forms of scarlet fever.

Treatment.—No treatment essayed during the actual epidemic had any influence on the duration of the malady. For relief of the pains, analgesin and salicylate of soda were of about equal value. The former yielded greater success in cephalalgia, and at times lowered the fever by producing an abundant perspiration; its effects were transient. The salicylate of sodium, excellent in arthralgic myodynia, was attended with the inconvenience of provoking vomiting and of aggravating the inappetency. As for the quinine *sulphate*, in addition to its being impotent against the fever, it embarrassed the stomach still more, and augmented the vertigo. On the other hand, quinine was necessary in malarial complications, and the *muriate* proved a satisfactory as well as an excellent substitute.

The gastric condition was happily combated by calomel in fractional doses. Taken from the beginning, it ameliorated the bad taste in the mouth and overcame the constipation, which to other purgatives would yield only temporarily. An emetic frequently appeased the vomiting. The potion of Rivière yielded temporary effects.

Chloral and the bromides gave tolerably good results in insomnia, but opium always

succeeded best, diminishing at the same time the præcordial anxiety and the vomitings. A one-fiftieth solution of chloral, in local applications, was quite efficacious in the pruritus which accompanied the desquamation. Jaborandi, administered on several occasions, was of no utility. Lemonade appeased the thirst, and was taken by the patients with pleasure. A lacteal diet was rigidly observed during the febrile period.

The bitters, in all their forms, were administered, without result. The return of the appetite, furthermore, was in strict ratio to the progress of the cure.

I frequently observed, after the dengue, falling out of the hair, beard, and moustache; neuralgias—dental, supra- and sub-orbicular, and testicular; pseudo-rheumatic myodynia. Several patients were left profoundly anæmic; others were afflicted by gastralgia, flatulence, pyrosis. I also observed two cases of renewed tuberculosis; likewise several submaxillary abscesses, inflammations of the parotid gland, and abscesses of the middle ear. My distinguished confrère and friend, Hippocrate Argyropoulo, had the kindness to communicate to me two instances of renewed epileptic attack.

Case 6.—Girl 19 years old, idiotic and rachitic; suffered in early childhood from convulsions which persisted until the age of 7 years. Some time after the dengue, she showed evidence of renewed accesses, seizing her several times a day, and yielding only to strong bromide treatment.

Case 7.—Man, 67 years, strong, robust; had attacks of *grande mal* 25 years before, which were cured by a long and proper treatment. Since that time, he had been visited only with very short attacks at long intervals. Twelve days after his complete recovery from dengue, he suffered, as the result of great excitement, a convulsive attack which was repeated every three or four hours. One gramme of bromide of potash, administered every two hours, seemed quite efficacious. Despite the disappearance of the attacks, the treatment was pursued for three months.

Passing over the hæmorrhages, as also the pulmonary and nervous phenomena which I have described with the symptoms characteristic of the malady, on account of their frequency during the actual epidemic, I will confine myself to the mention of complications of unusual character, which singularly aggravated the condition of the sufferer; thus, with respect to the cerebro-spinal system, I note the lumbar myelitis and ascending ague, simple paresis of the lower limbs, meningitis, cutaneous and muscular hyperæsthesia, lypothymia, and delirium of persecution. Phlegmasia *alba dolens* was at times observed as one of the complications of dengue; also a case of pneumonia in an old man of 71 years; and one of pulmonary gangrene in a diabetic—both mortal. But the most usual complication was intermittent fever. At times it supervened during the febrile period, and was ushered in by a chill returning at fixed hours of the day; at times, during the period of remission, and manifested by pains in the limbs, cephalalgia and periodic *malaise*, disappearing after a sudation more or less mild.

The baneful influence of dengue on other maladies is still visible—a year after the epidemic. Rheumatic patients have suffered a renewal of their pains, with a remarkable intensity; hepatic and nephritic colic received a new impulse; dyspepsias are aggravated; migraine, neuropathia, and hypochondria, have been rendered more intense, diseases of the womb exaggerated; the milk of nurses diminished or completely suppressed; and, in general, all chronic affections have gained ground on a soil already conquered, and have become weaker through the very intervention of the ally. I must, however, except maladies of the heart, which have shown no effects of the dengue, and ophthalmic granulations, which have even retroceded after its termination, according to the statement of the distinguished occulist of Smyrna, Dr. Isigenis.

Dengue in Children.—This was mild, for the most part. It began by convulsions or green diarrhœa, followed by vomiting and fever; the pains were quite pronounced, the little patients were restless and refused nourishment; tongue coated. The exanthem, often roseolic, made its appearance the third or fourth day and lasted from five to twenty-four hours; it was unique or "bichrone." The children returned rapidly to their normal condition, and readily recovered their appetite. Several cases of death were

observed from convulsions, but the disease, on the whole, was seldom fatal.

I believe that the foregoing gives a complete description of this epidemic, which afflicted the population of Smyrna for more than four months. The diversity of its forms and the variety of supervening symptoms, have seemed to me quite sufficient to justify their presentation to the medical public, to the full measure of my means.

SMYRNA, August, 1890.

PHYSIOLGICAL ALBUMINURIA.

BY E. P. HURD, M. D.

Quite an interesting controversy has lately been going on in Médecine Moderne between Senator, on the one hand,—the author of the article on Diabetes in Ziemssen's Cyclopædia and of a recent treatise on Albuminuria; and Lecorché and Talamon, on the other,—authors of an able popular treatise in French on the same subject. Senator maintains:

1. That the urine normally contains albumen, like all serous exudations:
2. That physiological albuminuria is an exaggeration of the normal elimination of albumen:
3. That physiological albuminuria has the same general claim for acceptance as physiological glycosuria or oxaluria.

He bases his affirmation on the fact, that in a great number of persons presenting all the appearances of good health, albumen is found in the urine. The quantity is of course small, and the albumen does not reveal itself to ordinary (coarse) tests, nevertheless delicate tests show appreciable traces. According to his researches, the proportion of adults in whom there are traces of albumen in the urine is fully 22 per cent.

Granger Stewart states that out of a total of 405 adults, whose urine he tested, 25 per cent. had albumen in the urine. These, bear in mind, were persons in ordinary health. "If," says Senator, "out of every four or five individuals, whose age does not exceed sixty years, there is one in whose urine albumen is found one or more times, it is impossible to consider such albuminuria as a morbid phenomena, and it must be admitted that there is such a thing as physiological albuminuria."

The French authorities, on the other hand, insist that there is no such physiological condition as Senator maintains. If, they say, 75 per cent. of healthy persons have no albumen in their urine, it seems logical to conclude that the absence of albumen represents the normal state; and they see no real difference between what is normal and what is physiological, although Senator labors to establish such difference.

The whole question, in their estimation, is reduced to the three following propositions:

1. The frequency of albuminuria in persons seemingly healthy is no reason for not regarding such albuminuria as a morbid phenomenon:
2. From the fact that an individual has all the appearances of good health, we ought not to conclude that all the organs are perfectly sound:
3. The albuminuria which is called physiological possesses distinctive characteristics which enable us to differentiate it from the albuminuria which is dependent on a renal lesion.

With regard to the first proposition it will be seen that the existence of physiological albuminuria is disputed. It is seen that the frequent detection of albumen in the urine of persons having all the appearance of vigor and good health, has led Senator to construct his theory. Albuminúria, in other words, cannot be regarded as a pathological phenomenon, if found in one out of every 4 or 5 individuals in average health.

To show the viciousness of this mode of reasoning, Lecorché and Talamon have applied it to various other slight disorders of function, whose frequency might justify a similar conclusion; coryza and dyspepsia, for instance. If albuminuria is a physiological phenomenon, because it is observed in one out of every four cases of persons who have the appearance of good health, are we to conclude the same in reference to dyspepsia, to dilatation of the stomach, etc., which are surely found existing in quite a large proportion of people without any other disorder of the general health?

Lecorché and Talamon, as is well known, maintain that albuminuria is always the result of a lesion of the endothelial lining of the glomeruli. Adopting the views of Heidenhaim, they teach the urine is not

simply a filtration which occurs in accordance with physical laws. It is in reality a *secretion;* the endothelia of the capsules have for their office, not merely the removal of water from the blood, but also the keeping back of albumen; in fact, the endothelium allows only the water and salts to pass through, and thus plays the same selective *rôle* toward these elements of the blood plasma, which the cells of the tubuli play towards urea and uric acid. If, say these writers, the urine is a simple transudation assimilable to other transudations or serosities, it is necessary to explain why albumen is found in such feeble proportion in these physiological cases, that it is impossible to demonstrate its presence by means of the ordinary reagents.

The other serosities are frankly albuminous; why does the urinary transudation contain only an appreciable trace of albumen? It must be because the renal filter is of such a character as to oppose the passage of albumen. If this is the case, the urinary filtration is not subjected, as Senator teaches, to the laws of physics alone, but is partly dependent on vital, quasi-intellectual selection.

The glomerular endothelium thus comes in for a part in this filtrating, which does not take place precisely as do the ordinary transudations through the endothelium of the serous membranes If we are, then, obliged to admit that the elements of the filter interfere to prevent the passage of albumen, Heidenhaim's contention seems to be established, that these elements seem to have a special fitness for opposing this filtration. Hence the separation of water, like that of urea, is effected by a selective action of the renal endothelium.

It is hardly fair to compare the filtration of albumen with that of sugar in cases of glycosuria, or oxalic acid in cases of oxaluria. The proportion of urinary sugar is in direct ratio with that of the sugar contained in the blood, and we can always find traces of sugar in the urine because it always exists normally in the blood. We cannot reason in the same way with regard to albuminuria, the quantity of albumen in the urine not being in relation with the proportion of albumen in the blood-plasma, and when albumen in notable quantity passes out by the kidneys we always find a lesion of the glomerules.

What reason is there for supposing that no lesion — however slight—of the epithelium exists when albumen passes out in small quantity?

Lecorché and Talamon reason from pathological facts in which the morbid condition of the endothelium is well known to the so-called physiological facts of Senator, and argue with strong probability that if, in cases of Bright's disease, the presence of albumen in the urine is always dependent on morbid alterations of the endothelium, in the slight forms of albuminuria, the escape of this element from the blood always indicates some degree of alteration of the endothelium. As the albuminuria which accompanies advanced states of renal atrophy is compatible with external appearances of health, why should it be a subject of surprise that the albuminuria which is dependent on slight lesions of the glomerules should not trouble the general well-being of the organism? What we call health, *i. e.*, the general equilibrium of the organic functions, is compatible for a long time with lesions, more or less extensive, of important organs.

A condition of absolute integrity of these organs is actually the exception. As for the kidney, nothing is more rare, these writers assure us, than to find these organs presenting a normal aspect, even to the naked eye.

If out of 100 living adults 25 are albuminuric, how many times in 100 autopsies will we find the kidneys altered in their structure and even in their macroscopic appearance? Most kidneys, in fact, present on their surface linear depressions, fibrous retractions more or less extensive, in variable number, which are certain indices of a former morbid process,—cicatrices of lesions which have ended in recovery.

When we think of the innumerable variety of pathological causes capable of acting on the renal filter and injuring its lining, we cannot be astonished either at the frequency of the albumunuria or of the renal alteration.

The French writers, above-mentioned, take up the *third* proposition, and show that there are no facts to differentiate the albumunuria called physiological from that due to known

disease of the kidneys. Of course, this physiological albumunuria must rest on a *petitio principii*, to wit, that in "an individual having all the appearance of good general health, it is to be assumed that the kidneys are perfectly sound in their secreting elements." This is shown to be highly improbable.

Some interesting facts have been adduced, which prove that in proportion as a person advances in years, albumunuria becomes more and more common, so as to attain between the ages of 60 and 90 years, the proportions of 50, 60 and 70 per cent., and that to this increasing frequency of the albumunuria corresponded a like frequency of renal lesions, so that out of 75 aged persons dying without having presented any symptoms directly imputable to a renal disease, in 56 the kidneys showed profound and diffuse lesions of long standing, whose aspect indicated a slow and prolonged evolution.

NEWBURYPORT, Mass.

LAPAROTOMY.

BY W. R. HUBBERT, M. D.

I question whether any operation in the whole field of surgery is giving evidence of as good results as that of laparotomy; and it is curious to note the difference in opinion that has taken place during the last two or three years, regarding the fatality of the operation. Five years ago the operation was little resorted to; now we are hearing of it from all sides. Ten years ago the death rate, taking the average of 135 cases (the largest number of authentic cases recorded at that time), was 21 per cent. But by skill in operating, and a more thorough understanding of the danger points to be avoided, and more than all, a strict adherence to the antiseptic method, the death rate has been reduced so that now it is probably not more than 10 per cent., and with some operators 5 per cent. Indeed death from laparotomy is now a rarity. The good that has resulted after the operation has been more than ever dreamed of by Battey or Hegar or by any other of the earlier operators. We are constantly hearing of bedridden females who are being restored to complete health after enduring years of suffering, by this operation. It is thus ridding our offices of a class of cases that were at one time our pity and our greatest care, and is proving an unmitigated blessing where it was held of questionable benefit. Those who formerly denounced the operation were many. Thomas says (Ed. 1880, Diseases of Women) "It is an operation attended by grave dangers and by doubtful benefits," and Mundè remarked, "If the positive benefits of the operation were as assured as its rate of recovery, all opposition to its performance would soon cease."

Performed by Battey, and often called after his name, the operation frequently includes more than the removal of the ovaries, in fact the operation is often a salpingo-oöphorectomy, one or both ovaries being found diseased, necessitating their removal. It may be said that practically the removal of healthy ovaries rarely takes place, and on this account the objection raised to the operation that it will lead to female castration to avoid child bearing, will hardly follow. We have yet to hear of the first case where a surgeon has operated for the gratification of any such motives, but it has always been performed for the relief of disease and disease only, and on operating we find pathological conditions which have given rise to septicæmia, the latter being sometimes masked by other conditions which seemed to be causative. I was recently present at several operations by Dr. Carstens, of this city, who has performed some 25 or more laparotomies within the past two or three months. One case I recall, of a woman who had suffered for three years with attacks of peritonitis, being confined to bed most of this time. On opening the abdomen one ovary was found completely broken down, giving rise to an old pelvic abscess with very firm walls, and containing nearly a quart of pus. The other ovary was much hypertrophied and its Fallopian tube was enormously distended and filled with pus. The abscess was drained, both ovaries and tubes were removed, and no elevation of temperature followed. The woman walked to the Doctor's office on the 14th day.

An untold number of years have been added to woman's life by laparotomy and that too, during the past five years, and we prophesy for the operation a great future.

DETROIT, Mich.

THE DIAGNOSTIC AND THERAPEUTIC VALUE OF "TUBERCULIN."*

The voluminous reports† which have just been issued, at the request of the Prussian Government, from the University clinics and pathological institutes of that country, afford an opportunity for reviewing the situation with regard to the efficacy of the remedy for tuberculosis introduced by Prof. Koch. It must, however, be noted that these reports, for the most part, deal only with cases injected up to the close of the year, and therefore do not embrace much more than a period of observation extending over six or eight weeks. It says much for the eagerness with which the remedy was adopted, that the total number of patients injected in the fifty-five clinics amounted to no less than 2,172, of which number about 1,700 may be regarded as having been under treatment sufficiently long to afford some indication as to the efficacy of the plan. At the same time this unique testing of a new remedy, and this remarkable example of collective investigation, cannot be considered as embodying a conclusive judgment. For the reports, which bear names of men of well-tried capacity and experience, are mostly cautious and guarded in their conclusions—all admitting the impossibility, after so brief a trial, of arriving at so positive a result; added to which is the fact that, in many instances, there has been no selection of cases. Thus, as regards phthisis, it is clear that the essential condition imposed by Prof. Koch to obtain a curative result—namely, that the cases treated should be quite in the initial stage—has been far more honored in the breach than in the observance.

It would be a difficult and wearisome task to analyze the contents of this bulky volume in detail, even if our space afforded it. The book is within the reach of all interested, and it will doubtless receive careful study at their hands. Nor shall we attempt to reproduce any of the elaborate statistics which give, in striking form, the number of cases treated, their nature, and the extent to which they were influenced for good or ill by the use of the new method. All we can do here is to avail ourselves of the admirable summary of the reports compiled by the editor, Dr. Albert Guttstadt, and to extract therefrom some of the chief opinions expressed by eminent authorities as to the value of "tuberculin" in the diagnosis and treatment of tubercular diseases. For this purpose it will be convenient to follow Dr. Guttstadt's plan, and deal in turn with cases of internal tuberculosis, and then with those of tubercular disease of external parts.

The importance of a new aid to the diagnosis of tubercular disease within the body is obvious, not only as enabling one to differentiate it from allied conditions, but as a guide to the early adoption of therapeutical measures. In Koch's "tuberculin" it was hoped that we should possess a divining-rod which would reveal the hidden foci of an insidious malady; and there were many who declared that therein would lie its chief value. Experience, however, as embodied in these reports, compels but a guarded acceptance of this opinion. A few observers, such as Profs. Lichtheim and Schreiber of Königsberg, and Dr. P. Guttmann of Berlin, regard it is an efficient test, but Prof. Leyden (Berlin) thinks it cannot be solely relied upon; and Prof. Gerhardt says that no reaction was observed in some cases when bacilli were present. Prof. Ebstein (Göttingen), who appears to have been the least impressed of all with the value of the remedy, does not think there is any absolute certainty in its use for diagnostic purposes. Prof. Biermer (Breslau) is also very cautious; he had two cases of undoubted tuberculosis with bacillary expectoration which gave no reaction, either local or general; whilst in another case, of alcoholic tabes, with no suspicion of tubercle, there was a marked general reaction. Prof. Quincke (Kiel) thought it gave more certain indications in cases of slight lung disease, but could not admit that there was latent tubercle in every case in which a general reaction followed the injections. The Greifswald professors—Mosler, Strubing, and Peiper,—speak with somewhat more confidence, whilst Prof. Schultze of Bonn thinks it a test "within limits," and Prof.

* Lancet, London, March 21st, 1891.

† Die Wirksamkeit des Koch'schen Heilmittels gegen Tuberculose. Amtliche Berichte der Kliniken, Polikliniken und Pathologisch anatomischen Institute der Preussischen Universitäten. Berlin: Verlag von Julius Springer, 1891.

Weber of Halle, that it is far less certain diagnostically in internal than in external tubercle. Prof. Finkler of Bonn met with but few exceptions to the rule of reaction among cases of commencing phthisis, and did not regard the absence of reaction in chronic phthisis as diminishing its value in diagnosis. Lastly, Prof. Rumpf (Marburg) believed it was a test which should always lead to greater care in physical exploration of the chest and in the search for bacilli. On the whole, then, it would seem as if the position taken by Prof. Leyden was the correct one. There is general agreement as to the fact of reaction (local or general, or both) whenever tubercle is present, thus bearing out the singular selective property of the substance; but cases have undoubtedly occurred in which in the presence of tubercle there has been no reaction, or in which the converse has obtained. The reaction, therefore, is not pathognomonic, and the test cannot be absolutely relied upon.

The experiences gained of the value of "tuberculin" as a therapeutic agent will be eagerly scanned. The unreasonable hopes excited on the first announcement of the discovery have, in many minds, given way to almost as unreasoning a rejection of its utility; and it must be admitted that these reports, on grounds above stated, are inadequate to determine the question one way or the other. Still, when every allowance is made for the duration of the treatment, for the elimination of cases which were wholly unsuitable for trial, or of those in which improvement might well have taken place without any other than dietetic treatment and good nursing, there is no gainsaying the fact that the results here given are, on the whole, favorable to the cautious use of "tuberculin" in phthisis. Prof. Leyden abstains from giving any definite judgment, and notes that, although cases of early phthisis improved, yet the change was not striking, and bacilli were still being expectorated. Prof. Senator, on the other hand, is more hopeful, especially if a longer time be allowed for the treatment. Indeed, the cases of "cure" in the records are so few as to hardly enter into the reckoning; whereas the cases of *marked* benefit were considerable, and those of "improvement" without such qualification still more numerous. Prof. Ebstein, to be sure, is sceptical even as to the latter, but he stands almost alone in this respect. Prof. Biermer cites a case of tubercular pleurisy with effusion, which rapidly got better under the treatment. Dr. P. Guttmann, of the Moabit Hospital, who worked in conjunction with Prof. Koch, is the one who gives the most striking results of improvement in these pulmonary cases; and others, as Prof. Lichtheim, regard the results as remarkable. One cannot fail to be struck by the fact that the improvement was often more manifest in the general condition of the patient, and especially in his subjective sensations, than in the local signs as derived from physical examination. The indications derived from auscultation and percussion have been variable. Some report a frequent diminution in the dulness and râles; others note an increase in these signs, but often independently of the more constitutional effects. There is a preponderance of testimony to the influence the treatment had in diminishing or wholly arresting night sweats; whilst the observations on the sputum fairly agree in the fact that after the first increase in its amount and its bacillary constituents, it generally diminishes in both respects. Some lay stress on the degenerative changes undergone by the bacilli, but others (more correctly) think such changes of no special significance. There is a not inconsiderable difference as regards the question of the weight of the patient under treatment, for whereas some state that a certain proportion gained in weight, others note that this never increased, and that it either remained stationary or there was a loss (Mosler). Dr. Fraentzel says that as a rule there is loss in weight so long as reaction occurs, and after that a gain. Dr. Guttmann notes that many patients increased in weight, some notably so; and Prof. Gerhardt, dealing with sixty-one cases, gives twenty-two as gaining, seventeen as stationary, and twenty-two as losing, in weight. These are only a few of the conclusions arrived at with respect to the most interesting question of the applicability of the remedy in pulmonary phthisis. It must be remembered that the most favorable results occurred in those in whom the disease was least advanced; but that the pro-

portion of cases in which "no improvement" took place, was not strictly in harmony with the extent of the disease, may be gathered from the following record: Of 242 cases of commencing phthisis, 93 were not improved; of 444 cases of moderately advanced phthisis, 278 were in this category, together with 11 deaths; and of 246 very advanced cases, with cavities, there were 162 unimproved, and 30 deaths. It will be seen that there is very little difference, except in respect to mortality, between the two latter series. It must also be remembered, in estimating the degree of improvement in the early stages,—and, indeed, in all classes—that the hopes excited by the new treatment may, in some cases, have led to a temporary rally of the forces of the patient without any real material advance towards the cure of this malady. When all is said, however, it would seem that "tuberculin" has a place in the treatment of pulmonary tubercle, but one which is much more limited than was at first thought likely; and if the catalogue of cases which do not improve under it is to be in any way diminished, it will have to be by a most careful discrimination in the selection of suitable cases. The problem is whether the advantages derived from its use are sufficient to counterbalance the possibility, so strikingly brought forward by Prof. Virchow, of harm arising from the use of an agent that exerts a disintegrating action upon tubercular deposits. The opinions expressed in the late prolonged debate at the Berlin Medical Society represent, we imagine, more clearly the standpoint at which the remedy is regarded at present, than do the reports contained in the volume before us, which were the first fruits of the discovery.

So far we have confined our survey of this interesting work almost solely to pulmonary phthisis, perhaps the most difficult class of tubercular disease of all upon which to obtain a definite judgment.

Whatever may be the judgment of time and further experiment with tuberculin, it cannot be questioned that Koch's discoveries have stimulated investigation of the nature and treatment of tuberculous processes. All over the civilized world many new methods for the cure of tuberculosis are being tried and must ultimately be fruitful of some valuable practical results.

Correspondence.

ARBOR DAY PROCLAMATION.

In accordance with established usage, I hereby designate Thursday, April 30th, 1891, to be observed as Arbor Day.

I earnestly appeal to all our people to observe the day, or a portion thereof, by the planting of trees, vines, and shrubbery along the highways, in the cemeteries, and about their homes.

To those who bear in mind the needs of the generations to come, as well as of the living, the rapid destruction of our forests and the diminished supply of timber, present a grave problem. We who enjoy the present should see to it that we use only so much of the products of the earth as is necessary for our wants, and we owe it to posterity to replace, so far as we can, what we are compelled to borrow from the resources of Nature.

Along the highways in many parts of the State the axe has been busy with the oak and elm, and the traveler finds scant shelter from the summer sun. He whose necessity compels him to destroy a shade tree for firewood can at least plant an acorn or a sapling in return. Shrubbery, vines, flowers, and fruit trees are blessings which all mankind enjoy; and each one can do something to render them more abundant and make the world more pleasant for himself and his fellows.

Let those who are looked to for instruction from the pulpit, the schoolhouse, and through the press, enforce the simple lesson which the occasion suggests.

Given under my hand and the seal of the State, at the Capitol in Lansing, this eleventh day of April, in the year of our Lord one thousand eight hundred and ninety-one, and of the independence of the United States the one hundred and fifteenth.

EDWIN B. WINANS,

[L. S.]

By the Governor.

DANIEL E. SOPER,
Secretary of State.

WITCH HAZEL IN LA GRIPPE.

When influenza first developed in Norwalk, it generally manifested itself first in the mucous membrane, of the nostrils and

the upper fauces. From there, in some cases, it advanced to the bronchial tubes, producing bronchitis, and in some others laryngitis. Thinking that if I could apply the vapor of boiling water to the part affected it would afford some relief, I added 1 oz. ext. of witch hazel to 2 qts. of boiling water. I then heated small stones in the fire to a red heat, and placing them in the solution made, I ordered the patient, after covering the bowl and his head with a cloth, to inhale the vapor generated. This was repeated two or three times, with intervals of two hours between. After the second inhalation, in most cases, the congestion was greatly relieved; but in some cases a third inhalation was required. At the same time I administered one or two grains of cinchonidine three times a day for the same effect. I found that this treatment was efficient only if employed within the first eight hours after the inception of the disease. Naturally, the patient will require tonic treatment for some time, but the inhalation of witch hazel seems to abort the coryza and prevent the extension of the catarrhal condition to the bronchi and lungs.

I know there are many infallible cures for influenza recommended, but submit my experience in the hope that others may try it with equally favorable results.

JOHN W. MACLEAN, M.D.

NORWALK, CONN.

A TRUE FISH STORY.

To the Editor MEDICAL AGE:

I wish to report to your medical readers a curious case of heart pulsation after death in a fish:

Half an hour after sun rise a spoonbill catfish was killed and dressed at Alexandria, La., Feb. 27th, immediately in front of the Exchange Hotel, on the bank of Red River, in which the fish was caught. The edible portion was served for dinner that day at a restaurant in the city. The head, being a large one, was stuck on a pole in a prominent place within view of passers-by as an advertisement for the fisherman. The fish was five feet long, about two feet from the back of the head to tip of bill. The latter was about 16 inches long. Fourteen pounds of solid meat from the fish were sold by the fisherman, William McCoy, who is an expert in his line, and as a piscatorial anatomist is unexcelled.

In dressing this kind of fish, he amputates the body behind the shoulder, instead of leaving the shoulder attached to the body, as is usually done in cutting up most fish. In the fish the heart is attached to the base of the head.

The writer, in company with Mr. R. J. Parker, viewed the head. Greatly to our surprise, we found that the heart of the fish, which was still attached to the head, was beating regularly, and by timing it with a watch, found it to pulsate every twenty seconds.

At 3 P.M. of the 28th, thirty-one hours after the fish was dressed, the heart still continued to beat, to my personal knowledge.

The fisherman, when told that the heart was beating, was incredulous, but on inspection, in company with Mr. J. E. Carson, he observed it. He stated that he had never before known a heart of a fish to beat longer than ten minutes after it was killed.

I don't tell this as a fish story, but simply bring it to the attention of the medical profession for investigation. I might say that one of Alexandria's most prominent citizens, Mr. L. B. Baynard, druggist, will vouch for its truth, as he, with many others of the townspeople, saw it.

Truly yours,

EDWARD T. MITCHELL.

MONROE, LA., April 2d.

ETHER DRINKING IN MICHIGAN.

A late number of the Druggists' Bulletin, and again the New York Medical Journal of Feb. 12th, 1891, contain articles referring to the common use, in the upper counties of Scotland, and in Ireland, of ether for a beverage. Judging from my own observations I presume by "ether," the Co. Spt. of Ether, or Hoffman's Anodyne, is intended. Its use is, by no means, limited to the Scotch. In the northern counties of Michigan dealers daily sell enormous quantities of Hoffman's Anodyne to Finns, Poles, and Swedes. The nationality most represented among the purchasers are Finns. It is not unusul to see six or seven of that nationality awaiting their turn to receive their pint or half-pint of this fluid, always for "medicinal purposes." They generally mix it with alcohol or whiskey.

A. W. NICHELSON.

[Commercial "Sulphuric Ether" is the fluid used in Ireland.—ED.]

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

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DETROIT, MICH., APRIL 25, 1891.

Editorial.

THE LENGTHENING OF LIFE.

Much comment is made in medical literature as to the effect on the public health of the strain of nineteenth century existence.

If we were to credit all that is claimed as to the influence of the present prevailing rapidity of life on the mortality rate, we would be led to believe the average duration of life now to be less than in preceding ages.

This is not, however, the fact. On the contrary, statistics show human life has lengthened twenty-five per cent. during the last half century.

The average of human life in Rome, under Cæsar, was eighteen years, now it is forty. The average in France fifty years ago was twenty-eight; the mean duration in 1867 was forty-five and one-half years. In Geneva, during the thirteenth century, a generation played its part upon the stage and disappeared in fourteen years; now the drama requires forty years before the curtain falls. During the golden reign of Queen Bess, in London and all the large cities of Merry Old England, fifty out of one thousand paid the last debt to nature yearly, which means that instead of three score and ten they averaged but one score. Now in the city of London, the average is forty-seven years.

Dr. Spencer Graves, in a recent address, states that "nothing taxes vital powers like the spirit of unrest which exists all over the civilized world; few, indeed, are quiet and contented with the life they have; ambition invades almost every household and spares neither rich nor poor, old or young; all join in an excited, mad race to better their condition."

In spite of this increased nervous strain there have been causes operative which have strongly tended to lengthen life. Epidemics of contagious diseases which formerly were responsible for the high mortality rate are now, by means of the enforcement of quarantine and sanitary regulations, greatly lessened in frequency and severity.

There can be no question that the progress in the treatment of disease has also had much to do with the decrease of the mortality rate during the last half century. The indications are that as the causes of disease and their treatment become better known and sanitary laws more generally enforced, life will be still longer preserved.

Ignorance of and lack of observance of the laws of hygiene are most powerful causes of disease and premature death.

Among the existing evils that deserve the consideration of those interested in public health, and which it may be confidently expected will be greatly ameliorated in future are overcrowding, imperfect ventilation, faulty sewerage, improper methods of nutrition.

Further reform in this direction can only be brought about by national, state and municipal legislation which will enact and enforce practicable building and sanitary laws and restrictions and provide fit punishment for the sale of adulterated foods.

It should be the province of the physician to inculcate sound views on these subjects in his community and use the influence he may possess in presenting to legislators the importance of providing funds for the maintenance of Boards of Health, and necessary Inspectors for enforcing proper laws.

At present there is a woeful lack of interest on the part of legislators as to securing proper maintenance of Boards of Health, evidenced by the fact that in Michigan it has been seriously proposed to abolish entirely the very efficient Board of Health.

THE THERAPEUTIC APPLICATION OF PEROXIDE OF HYDROGEN.

So many contributions to medical literature concerning this agent have now been published that a brief review of its practical

therapeutic application may nót be without interest.

B. W. Richardson, M. D., F. R. S., whose pen has contributed much to the literature of preventive medicine as well as therapeutics, publishes in the London Lancet, March 18th and April 4th, a scholarly article comprising the results of his study of peroxide of hydrogen, covering a period of thirty-three years. The author first presents a historical sketch of the introduction of this agent, and then proceeds to discuss its action and range of therapeutic application, its pharmacology and *modus operandi* of administration. He has employed it with advantage in diabetes, phthisis pulmonalis, pertussis, syphilis, diphtheria, diseases of the intestines, eczema, typhoid fever, tetanus, hydrophobia, and locally for ulceration and purulent exudation.

The modes of administering peroxide of hydrogen are manifold. Dr. Richardson uses it not only locally as an antiseptic in dressings, as a gargle, and as a spray in the sick-room, but *per os*, by inhalation, hypodermatic injection, inunction, mechanically as a dilator in intestinal obstruction, and for differential diagnosis in determining whether a secretion contains pus or mucous only.

As to its pharmacology, peroxide of hydrogen is made by the action of an aqueous acid solution on peroxide of barium, the number of volumes in each specimen turning on the number of precipitations. A ten-volume solution for medicinal purposes may be used; but for special purposes a solution of twenty and even thirty volumes may be employed. In order to keep the oxygen in the solution, it is necessary to have it slightly acidified, either by dilute nitric, hydrochloric, or phosphoric acid; but the dilute phosphoric acid is to be preferred for this purpose. In this form the solution can be administered internally in doses varying from a fluid drachm to a fluid ounce; two or four drachms, diluted in ten fluid ounces of water, may be considered an average dose. The taste is peculiar, being identical with that of ozone when inhaled by the mouth, and not at all dissimilar to the taste of chlorine in a weak solution. For injection purposes the solution should be rendered neutral by the cautious addition of caustic soda or potassa. The soda is the best; but it should not be neutralized until the time it is wanted. In ten volumes it may be injected either into the cavities or into the celluar tissue without being further diluted. The solution of the peroxide is incompatible with many substances; but compatible with the following: The mineral acids, tannin, alcohol, glycerin, alcoholic solutions of the alkaloids, and alcohol combined either with ether, amyl hydrate, amyl nitrite, or iso-butyl.

MEDICAL LEGISLATION.

Proposed amendments to existing medical laws are now pending before a number of our state legislatures, some marking advance and others retrogression.

New York heads the list with bills involving an expenditure of $3,500,000. The removal of the pauper insane from the county poor-houses to State Asylums; the appointment of matrons at police stations; and a park at the Adirondacks to conserve the Hudson river water supply, are among the leading features.

Connecticut advances in requiring examination before a Board of Examiners.

Pennsylvania, proposes two measures, emanating, one from the Allopathic the other from the Homœopathic school. These also mark an advance.

Michigan displays only activity in a retrograde movement, by the proposed abolition of the state board of health, which, by the way, is no fault of the medical practitioners.

Maine provides for the registration of vital statistics; a most important measure and one which should have been introduced long ere this.

Missouri, Illinois, Oregon, and California, are also taking a step forward, that of Missouri, providing a longer compulsory term in the medical colleges.

It is gratifying to notice this activity, as it bespeaks, a healthy growth of the professional standard that cannot but produce widespread benefit to humanity, and reflect honor and credit on the medical profession.

Book Notices.

THE POST GRADUATE CLINICAL CHARTS.—Designed for Use in Hospitals and Private Practice. Arranged and Published by Wm. C. Bailey, M.D., and J. H. Linsley, M.D. For Sale by Dr. Linsley, Director of Laboratories' New York Post Graduate School, 226 East 20th Street, New York. Price: 20 cts. per copy, $2.00 per dozen, or $15.00 per 100.

Each book keeps the record of one case eight weeks. If required, the book can be taken apart and new leaves inserted. It provides, in a most convenient and complete manner, for the systematic record of all facts, conditions and observations, the consideration of which is essential to intelligent treatment. Every physician, who desires to keep himself thoroughly informed of the varying conditions of his patients as an aid to successful treatment, should use such a record. The value of it to himself and his patient can not be overestimated. One great advantage would be also that much valuable clinical material and statistics could, at any time, be gathered from such a source for contributions to medical literature, which would operate in greatly advancing the more general knowledge of the best modern treatment of disease.

THE PHYSICAL DIAGNOSIS OF THE DISEASES OF THE HEART AND LUNGS AND THORACIC ANEURISMS. With 22 illustrations. By D. M. Cammann, B. A. Oxon., M. D. Published by G. P. Putnam's Sons, New York. 1891. Price $1.25.

This little work of 188 pages in 12mo form is a very excellent presentation of the significance of heart and lung sounds and the best modern methods of differential diagnosis of the various lesions which affect these organs. It is well printed, and the illustrations clearly convey the relations of the organs to their environment and their gross and minute anatomy.

THE DISEASES OF PERSONALITY. By Th. Ribot, Professor of Comparative and Experimental Psychology at the Collège de France, and Editor of the Revue Philosophique. Authorized Translation. Published by the Open Court Publishing Co., 179–173 La Salle St., Chicago. 1891. Price. 75 cents

The vagaries of emotional manifestations are of interest not only to the psychologist, but to the neurologist, the alienist, and all physicians who recognize the important rôle of the emotions in influencing adversely or favorably the conditions of disease.

Ribot's contributions to psychology are too well known to students of this fascinating subject to warrant extended comment on them. In this treatise he covers ground that every physician should be familiar with, but which is not included in text-books to which the profession are accustomed to refer.

INTERNATIONAL CLINICS—Quarterly and Octavo Volumes of 300 Pages, embracing Medicine, Surgery, Gynæcology, Pediatrics, Neurology, Dermatology, Ophthalmology, Laryngology, and Otology.

Messrs. J. B. Lippincott & Co. announce that they will, beginning with April, and quarterly thereafter, publish a work with the above title, comprising clinical lectures delivered in the leading medical colleges of this country, Great Britain, and Canada. Each volume is to be illustrated with photographic reproductions of the most important cases. The work will be edited by John M. Keating, M.D., J. P. Crozer Griffith, M.D., J. Mitchell Bruce, M.D., and David Finlay, M.D.

ELECTRO-ALLOTROPIC PHYSIOLOGY.—

There are electric batteries and electric batteries. Disappointment results if the battery is not a satisfactory one and the physician be not fully informed as to the proper method of application of this agent to attain the best therapeutic effect. The Jerome Kidder Manufacturing Co., 120 Broadway, New York, will send free to physicians, on request, a copy of Electro-Allotropic Physiology, which affords information as to the method of therapeutic application of the electric current.

WARNER'S THERAPEUTIC REFERENCE BOOK.

Comprises some convenient notes for physicians regarding the following topics: Aids in Memorizing Doses; Treatment of Asphyxia; Time of Incubation of Eruptive Fevers; Digestibility of Foods; Pharmaceutical Formulæ; Medical Formulæ; The Period of Gestation; Hypodermatic Medication; Incompatibles; Powders and Pills; Poisons and Antidotes; Posological Table; Prescription Writing; Weights and Measures.

Notes and News.

The Pneumogastric Nerve.—

Eugene Field, that "sweet singer" of Chicago, who must have suffered from "*La Grippe*," is credited with the following ode:

Upon an average, twice a week,
When anguish clouds my brow,
My good physician friend I seek
To know "what ails me now."
He taps me on the back and chest
And scans my tongue for bile,
And lays an ear against my breast
And listens there a while.
Then he is ready to admit
That all he can observe
Is something wrong inside, to wit:
My pneumogastric nerve!

Now, when these Latin names within
Dyspeptic hulks like mine
Go wrong, a fellow should begin
To draw what's called the line.
It seems, however, that this same,
Which in my hulk abounds,
Is not, despite its awful name,
So fatal as it sounds.
Yet, of all torments known to me,
I'll say without reserve
There is no torment like to thee,
Thou pneumogastric nerve!

This subtle, envious nerve appears
To be a patient foe—
It waited nearly forty years
Its chance to lay me low;
Then like some withering blast of hell
It struck this guileless bard,
And in that evil hour I fell
Prodigious far and hard.
Alas! what things I dearly love—
Pies, puddings and preserves—
Are sure to rouse the vengeance of
All pneumogastric nerves!

Oh, that I could remodel man!
I'd end these cruel pains
By hitting on a different plan
From that which now obtains.
The stomach, greatly amplified,
Anon should occupy
The all of that domain inside
Where heart and lungs now lie.
But, first of all, I should depose
That diabolic curve
And author of my thousand woes
The pneumogastric nerve.

Medical Men and Literature.—

Literary production in other than professional fields has in all ages divided with more purely technical studies the power of attracting the mental energies of medical men. Such names as those of Roger Bacon, Sir Thomas Browne, Locke, Garth, and others, have indeed so shone in the fame of letters that in their case an original connection with medicine has almost been forgotten. In these days the zeal for learning follows a more exclusively practical and scientific tendency. As if in harmony with the laws of the circulation, the cravings of the medical mind commonly find satisfaction within the round of its most familiar occupations. There are, however, not a few exceptions to this rule. We have not yet lost the medical poet or philosopher, nor have the efforts of romance in prose been unassisted by practitioners of our art. To employ thus the precarious leisure of routine in practice, cannot but refresh the mind of those most nearly interested; while recent experience might also be shown to prove that efforts thus applied have not been fruitless in refreshing the intellect of the reading community. Some faults might naturally be expected in the productions of a medical writer. Among the chief obstacles to his success may be numbered a too didactic style, a philosophic heaviness, above all a tendency to excess in realism, particularly if engaged upon that now all-popular and most profitable form of composition, the novel. An error of discretion, indeed, may sometimes lead to serious embarrassment. Take, for example, the case of a medical novelist in France, who was lately called upon to answer the allegations of an indignant husband that his wife's morbid state was exactly reproduced in the heroine described by her doctor, who was therefore liable for a breach of professional secrecy. The case might well have been one in which the cap of the proverb was found to fit a head for which it was not made; but it may serve, nevertheless, to accentuate the dislike to an exact description of morbid states and symptoms in which we must admit a share with many general readers. A high professional standard alike in literary taste and in true medical propriety, is, we take it, best maintained by those who can discreetly separate what are in them related faculties, and be medical in their medicine but scholarly in letters.—*The Lancet.*

The Country Doctor.—

BY ONE WHO KNOWS.

When the winds blow
And the blinding snow
Beats pitilessly in his cold face,
He must take the road
To some humble abode,
To visit some charity case.

When the winds roar,
When the rains pour,
No shelter or rest for him;
Be it dark or light,
Be it day or night,
No rest for each weary limb

When snug in bed
He pillows his head,
And hears the storm whistle abroad,
The unwelcome "Hello!"
Resounds at his door,
To summon him forth to the road.

A long weary ride,
To some one's bedside,
He plods on through mud and mire;
Relieves them of pain,
And starts off again;
Never expected to tire.

For months and for years,
'Till the white lock appears,
He toils thus throughout his life;
And when rest doth come,
And he is laid in the tomb,
What is left for his children and wife?

His total assets
Are a lot of bad debts,
Worth a cent on the dollar, perhaps.
And all of his fame,
His honor and name,
Is worth to them hardly two snaps.

The Pathological Drama.—

The British Medical Journal, *apropos* of the production of Ibsen's "Ghosts" in London, comments on the absurdity, from a medical point of view, of this portrayal of sexual aberration:

The theme is heredity. After an instructive discussion between his mother and a clergyman on free sexual relations, Oswald Alving, the hero, is overheard in an adjoining room making advances to a pretty servant in a manner more suggestive than decorous. The maid in question turns out to be his own half-sister, and Oswald at once proceeds to discuss the rectitude of that relationship countenanced by the Pharaohs, but is happily cut short by brain disease, the result of inherited syphilis, in a manner which may be deemed natural by the playwright, but which is wholly unknown to the physician. The question of the desirability of shortening his days by poison is under consideration when the curtain falls. To take all the disintegrating views of viewy people, to make them become self-conscious in plain John and Betsy, and operative on their lives, to adorn this "psychological study" with a quasi-scientific exactitude, as absurd and untrue as it is pretentious, is the rôle of the new great realist. There is some stagecraft, but the dramatic pamphleteer is much more apparent than the artist. It is sadly to be feared that the sanity of true genius has not appeared in this latest fad of staging grotesque pathology and ethical Nihilism. To the strict scientist such a play is an amusing travesty; to the moralist it is portentously significant. From the purely literary point of view, it would be well if admirers of novel genius should adopt Matthew Arnold's advice, and carry about with them a gem or two of the true masters to serve as touchstones in distinguishing the spurious and ephemeral from the enduring and truly great.

A Bill Providing for the Registration of Physicians in Massachusetts.—

The features of this bill are that no medical board of examiners is created, nor medical society authorized to give permission to practice, the bill simply requiring that any one who intends to practice medicine shall appear before a city or town clerk, and describe, among other facts, his degree, or, if he have no degree, what preparation or experience he has had in medicine. The register is to be open to public inspection, and a list of persons so registered is to be published annually by the State Board of Health.

The bill has recently, on technical grounds, been referred back to the Committee.

The Cause of Influenza.—

At the annual meeting of the State Board of Health, April 14th, Dr. Henry B. Baker, the President, presented a report covering his investigations as to the cause of influenza. He stated that the germs of influenza are generally at all times present, and the germs of pneumonia, tuberculosis and the other specific diseases, are somewhat widely disseminated, but there must be certain coincident meteorological conditions to irritate the throat and air-passages sufficiently to let the germs gain entrance to the body.

These meteorological conditions are the excessive prevalence of the north and northeast winds, and the excessive amount of ozone during the past three months.

Doctor and Preacher.—

We often hear of doctors dispensing and druggists prescribing, but rarely of anyone playing the double rôle of doctor and preacher.

The St. Louis Druggist reproduces the following epigram inspired by an individual who assumed the dual duties;

"*Omne tulit punctum qui miscuit utile dulci.*"

Parson and doctor joined in one
Most suitably we find;
The one the suffering body treats,
The other soothes the mind.
The parson shows the way to heaven;
And then, with tender care,
The doctor consummates the work,
And gets the patient there.

A Moral for Medical Writers.—

The Artist Printer touches upon a subject which interests editors and readers of medical journals, in the following poetic vein:

There is a man in our town, and he is wondrous wise; whene'er he writes the printer man, he dotteth all his i's. And when he's dotted all of them, with great *sang froid* and ease, he punctuates each paragraph, and crosses all his t's. Upon one side alone he writes, and never rolls his leaves; and from the man of ink a smile, and mark "insert" receives. And when a question he doth ask (taught wisely he had been), he doth the goodly penny stamp, for postage back, put in.

A New Disease.—

Two English physicians—Dr. Hale White and Mr. Golding-Bird—have recently described an affection to which they give the name "Idioglossia." It appears that the patients hear well and express themselves in articulate sounds, but such sounds are unlike those of any known language. The patients really have a language entirely of their own, in which there does not seem to be any confusion, *i. e.*, the sounds given forth have an intelligent application, and the same sound always has the same meaning.

The Da Costa Laboratory of Biology.—

It is announced that the trustees of Columbia College have determined to devote the late Mr. Charles M. Da Costa's bequest of $100,000 to the foundation and endowment of a laboratory of biology, to be built on the grounds of the medical school (the College of Physicians and Surgeons), and that the professor in charge of the department is to be designated the Da Costa Professor of Biology. This is an early and striking manifestation of the good likely to result from the union of the College of Physicians and Surgeons with Columbia College.

A Cod-Liver Oil Famine.—

The London Medical Press and Circular states that it is likely there will be a cod-liver oil famine during the coming year. The number of fish taken in Norway this season has not been more than one-eighth of the average quantity, and the oil, which could be bought last year at £2 10s. per barrel, now costs £8, and is not unlikely to go up to £15 or £20.

Dr. Charles T. Parkes,

Professor of Surgery in the Rush Medical College of Chicago, and for many years one of the most prominent Surgeons in the State of Illinois, died on March 28th, of pneumonia and pleurisy, after a very short illness. The beginning of his illness was an attack of influenza, which was ignored until it forced him to take to his bed.

Medical Inspection of Immigrants.—

The new immigration law, approved March 3d, 1891, went into effect on the 1st of April. The law provides that all immigrants who are not admissable shall be returned by the steamship companies which brought them over.

A Large Fee.—

Professor Grube, of Charkow, has received a fee of 5,000 roubles (nearly £800), besides travelling expenses, for an operation which he performed on a rich fishmonger of Astrakhan. Dr. Grube was in Astrakhan one day and one night.

Insanity from Koch's "Lymph."—

Dr. Jolly, the Strasburg alienist (Internt. klin Rund) has reported several cases of insanity due to Koch's "lymph;" acute confusional insanity, melancholia and stupor were the types presented by these cases.

Therapeutic Brevities.

Spermin in Locomotor Ataxy and Hysteria.—Dr. Bartelink related three cases, in which he tried subcutaneous injections of spermin. In one of the cases, referring to a tabetic gentleman with inco-ordination, paralyses, and cutaneous anæsthesia, the injection was rapidly followed by an increase of manual muscular strength (amounting to 15 kilogrammes), acceleration of the pulse, and restoration of cutaneous sensibility, the patient becoming able to freely run about in a dark room. In twenty-four hours, however, the amelioration disappeared altogether. No further injections were made. In another tabetic man, four injections failed to effect anything beyond a slight improvement of micturition. The third patient was a hysterical woman, suffering from ovarialgia, intractable vomiting, and sleeplessness. The first dose brought about some subjective amelioration (improvement of sleep, etc.). A second one increased ovarian pains. No objective changes could be noticed. The aggravation of ovarialgia is attributed by the author to spermin, inducing pelvic congestion, which supposition is confirmed by Dr. P. M. Krasnikoff, who tried spermin in an old lady with uterine fibromyoma. An uterine hæmorrhage set in shortly after the injection, the patient having had no floodings since 1879. Dr. A. F. Dobroff noticed improvement of vision in a hemiplegic man, who had received five injections. Dr. M. P. Jakovleff came to the conclusion that spermin was closely allied to castoreum, musk, and such-like substances, belonging to the group of stimulating remedies.—*London Medical Recorder.*

The Treatment of Carbuncle by Chloral.—Dr. A. E. Spohn in Phila. Med. and Surg. Reporter suggests the use of a ten-per-cent. lotion of chloral-hydrate as a lotion in carbuncle. His notice was first directed to this remedy in an accidental manner. On a distant journey, he came across a man in fearful suffering from several carbuncles. The only medicine he had about him that offered any chance of relief was a saturated solution of chloral in water and glycerin. Some of this was applied on poultices, with the intention of making the ordinary crucial incision next morning. By that time, however, the carbuncles looked so much better that no incision was deemed necessary. Two months later, the same man applied for a prescription of the remedy used, stating that his carbuncles had diminished in size without sloughing, and that they soon got well. The carbuncle on the back was three inches in diameter. In subsequent attacks, similar treatment has met with equally good results. Since that case, many other patients suffering from carbuncle have been treated with the ten-per-cent. solution of chloral hydrate in glycerin and water, applied constantly by means of absorbent cotton, combined with the internal administration of sulphide of calcium. The patients have done well, having little or no pain. The chief advantage claimed by the writer is avoidance of the old crucial incision, which he regards as a relic of surgical barbarism.

Treatment of Chronic Bronchial Catarrh or "Winter Cough."—Dr. T. G. Davis calls attention to the use of some old, but neglected, remedies which he has used during the past four years with great satisfaction in the treatment of chronic bronchitis:

Antimonium sulphuratum or golden sulphuret of antimony, United States Dispensatory, p. 208, fifteenth edition, gives the best results in cases in which the expectoration has assumed a yellow or greenish-yellow color and is profuse, almost suffocative in quantity. It should be given triturated with milk sugar in doses from $\frac{1}{60}$ to $\frac{1}{30}$ of a grain after meals and at bedtime; it may be administered with other remedies to quiet cough and allay fever, and, as most cases of chronic bronchitis with profuse secretion have slight fever, I usually prescribe tincture of aconite $\frac{1}{8}$ minim, tincture of bryonia $\frac{1}{10}$ minim, and tincture of belladonna $\frac{1}{10}$ minim, and if cough is troublesome, either codeine or chlorodyn is given on sugar at bedtime.

After the expectoration becomes thick, bluish-white, and tenacious—like boiled starch—and causes gagging, bichromate of potassium in doses of from $\frac{1}{60}$ to $\frac{1}{30}$ grain may take the place of the antimony salt, or may be given with it.

This method of treatment will give excellent results in many cases of phthisis.—*Medical News.*

The Subcutaneous Use of Anilin Dyes.—A short time ago, Mosetig published his method of treating malignant growths by the injection of anilin dyes, and called attention to the non-poisonous nature of the anilin compounds at present obtainable.

Stilling, to whom is largely due the introduction of different pyoktanins, points out a possible danger in the subcutaneous use of those dyes which are comparatively soluble in water. These substances if allowed to

reach the blood-current in too large a quantity, may stain and injure the blood-corpuscles. Some of Mosetig's failures may have been due to this accident. Malachite-green and methyl-blue are more soluble than methyl-and ethyl-violet, the latter being soluble in about 1-1350, and consequently safe to use as a powder on an open wound, but hardly safe to inject in a concentrated solution subcutaneously. The best preparation for the latter purpose is a substance with a long name, called for short ethyl-pyoktanin. The author also proposes in the treatment of malignant growths that the arteries which supply the tumor should be first tied, so as to render the growth temporarily anæmic, and that while in this condition it should be thoroughly permeated with the dye-stuff.—*Boston Med. and Surg. Journal*, April 2d, 1891.

Massage in Headache.—Dr. Norström, finding that a good many cases of headache occur where, though the symptoms are more or less like those of migraine, the remedies suited to that affection are of but little use, examined the heads of such patients carefully, and came to the conclusion that the pain must depend upon inflammatory thickenings, existing at the insertions of various muscles, especially the sterno-mastoid, the temporal, the scaleni, the trapezius, and the occipito-frontalis. These indurations do not usually produce any local pain, and therefore are generally unnoticed both by physician and patient. They are commonly the result of "taking cold," and the headaches they cause can be traced to changes in the weather. Dr. Norström obtained excellent results by regular massage of these indurated spots, the sittings lasting for about a quarter of an hour. Similar treatment is also efficacious where the headache is due, as it sometimes is, to enlarged lymphatic glands. Of course, little result can be expected from massage in headaches of anæmic or hysterical origin, or where there is organic or cerebral disease.

A Remedy for Anthrax.—Mr. E. H. Hankin (Centralbl. f. Bakter., vol. ix., Nos. 10, 11), of Cambridge University, has succeeded in isolating from the spleen and blood-serum of the rat an albuminoid substance which destroys bacterial life. It is a basic body, differing from any bases hitherto known in being insoluble in alcohol and in water, and in not dialysing. It is a globulin; and to its presence is ascribed the power possessed by the blood-serum of the rat of killing anthrax bacilli. Mr. Hankin thinks it probable that the immunity which the rat enjoys to anthrax and diphtheria is, in part at least, to be ascribed to the capability of the rat organism of producing this material. Still further importance is to be assigned to this research, from the conclusion that the bactericidal property of this substance can be exerted not only outside, but also within the body of animals susceptible to anthrax. Hence it is possible, he thinks, for the "protective albuminoid body of rats" to be utilised as a remedy for anthrax.

Cocaine in Asthma.—Having read in a medical journal of the efficacy of cocaine in checking the distressing dyspnœa of bronchial asthma, I determined to give it a trial, with the following result:

Breathing was very distressing, patient having to open her mouth wide in order, as she stated, "to enable her to take in breath." Countenance very anxious; was very apprehensive of danger from suffocation.

As all other remedies had failed to give relief, and she was becoming exhausted, one-fourth of a grain of cocaine 1-20 minims of distilled water, with one-fourth of a grain of morphine, were injected hypodermatically. The effects were rather remarkable; for in seven minutes the dyspnœa had quite disappeared, and the patient had become quite and composed.

Subsequent attacks, though quite as severe, were checked less quickly in about five minutes from time of injection, the relief continuing for from 8 to 24 hours.—C. R. D'Sylva, in *Indian Medical Gazette.*

Banana-Juice for Chronic Bronchitis.—The juice of bananas is recommended as one of the best remedies in chronic bronchitis with insufficient expectoration and marked dyspnœa. A drachm eight or ten times a day during the first days is usually prescribed, and later the dose can be diminished. The syrup is prepared as follows: Cut the fruit in slices and place in a glass jar; sprinkle with sugar and cover the jar, which is then enveloped in straw and placed in cold water, and the latter is heated to the boiling point. The jar is then removed, allowed to cool, and the juice is poured into bottles.—*N. Y. Med. Times.*

New Hypnotics.—Two new hypnotics, trional and tetronal, have recently been tested by Drs. Barth and Rumpel, of Hamburg. They proved to be of about equal value with sulphonal. In certain cases of nervous affec-

tions, however, where the last named failed, the two former had the desired effect, and therefore may find a field of usefulness in this direction. Injurious after-effects were not observed, and faintness, sleepiness, etc., were not complained of, as is sometimes the case with sulphonal. The dose of both trional and tetronal is between forty-five and sixty grains daily, given in single fifteen grain doses; the remedies are best administered early in the evening, finely powdered, and mixed with about six ounces of fluid.—*Dixie Doctor.*

Formula for Alcoholic Excesses, Etc.—

℞ Chloral hydrate,
Pottassium bromide, ää ʒ iv.
Extract cannabis indica,
Ext. hyoscyamus, ää gr. xiv.
Chloroform, ʒ ij.
Water (boiling), to Oij.

Dissolve the cannabis in the chloroform, and add the chloral hydrate. Pour on this the boiling water, and then add potassium and hyoscyamus. When cold, filter.

Combined with aromatic spirits of ammonia, we get a safe and efficient remedy for alcoholic excesses and other forms of acute mania in which insomnia, delirium, and like symptoms are manifest.—E. C. Hooved, in *Cincinnati Lancet and Clinic.*

Treatment of Coryza.—In the treatment of coryza Kola recommends that a teaspoonful of powdered camphor be added to a pitcher of boiling water, and that a cone of paper be placed over the mouth of the vessel, the other end of the cone being placed over the nose and mouth of the patient. The vapor which arises from the water is charged with the camphor, and may be inhaled for from five to ten minutes. Three inhalations are usually sufficient to arrest the most rebellious coryza. These inhalations provoke a most abundant secretion from the nasal and pharyngeal mucous membrane, and exert a favorable effect upon the inflamed parts.—*L'Union Médicale.*

Hot Sand-Bag.—A writer in the Nightingale says: The sand-bag is invaluable in the sick-room. Get some clean, fine sand; dry it thoroughly in a kettle on the stove; make a bag of flannel about eight inches square; fill it with dry sand; sew the opening carefully; and cover the bag with cotton or linen. This will prevent the sand from sifting out, and will also enable you to heat the bag quickly by placing it in the oven or even on top of the stove. The sand holds the heat for a long time, and the bag can be tucked up to the back without hurting the invalid. It is a good plan to make two or three of the bags and keep them on hand ready for use at any time when needed.

Kola Wine and Kola Bitters.—An analysis of kola wine and kola bitters for sale in the London market gives the following results: The alkaloid caffeine was readily extracted with chloroform. Further analytical results are as follows:—Kola wine: Alcohol, 17.00 per cent. by weight; 20.89 per cent. by volume; extractives, 8.72 per cent.; mineral matter, 0.32 per cent. Kola bitters: Alcohol, 20.58 per cent. by weight; 25.17 per cent. by volume; extractives, 9.90 per cent.; mineral matter, 0.20 per cent.

Kola has been recommended as a cure for sea-sickness.

Galactagogue Action of Galega.—At a meeting of the Society of Practical Medicine, January 15th, 1891, M. Carron de la Carrière read a paper upon this subject. He summed up his observations by saying that galega exerts a favorable influence in cases in which milk is insufficiently secreted. Given in the form of an aqueous extract, in the daily dose of 2. to 4. grammes (½ to 1 drachm), galega excites within a few days a notable augmentation of the milk. This increase relates not only to the water, but to the globules also, as is shown by direct analysis and the gain in weight of the child.—*Le Progrès Médicale.*

To Remove the Pigmentations of Pregnancy.—The following ointment is recommended to be rubbed into the affected parts twice daily, to remove the pigmentations which so often disfigure pregnant women:

℞ Cacao butter,
Castor oil, ää ʒ ii¼.
Oxide of zinc, gr. v.
Yellow oxide of mercury, gr. ii.
Eessence of rose, enough to perfume.

—*Therapeutic Gazette.*

Treatment of Alopecia.—Monin recommends the following treatment of alopecia:

℞ Gallic acid, 45 grains.
Olive oil, 6 drachms.
Vaselin, 1½ ounces.
Essence of lavender, 15 drops.

This is to be made into an ointment and applied with friction to the part affected, morning and night, for the arrest of the disease.—*L'Union Médicale.*

Jaborandi for Dropsy.—I have had under treatment a case of abdominal dropsy. The patient was a sufferer 9 years. The last few years the distention was enormous. The case passed into my hands after several physicians had exhausted their treatments. I found that almost everything had been used excepting jaborandi, which I prescribed in 20 drop doses *ter die*. Much to the surprise of everybody, the patient is seemingly cured, and was married a few days ago. The remedy was used 9 months.—Dr. W. S. Cline, in *Medical World.*

Tellurate of Sodium in Night-Sweats of Phthisis. — In doses of one-thirty-second to one-fifteenth of a grain, prescribed in solution, with alcohol of an agreeable form (julep alcoolisé), and taken at bedtime, tellurate of sodium is successful in staving off the exhausting night sweats in phthisis. It unfortunately gives an odor of garlic to the breath. It has been prescribed with success by Drs. Combemale and Dubiquet, of Lille.—*Rev. Gén. de Clin. et de Thérap.*

Syzygium Jambolanum.—This drug, after a latent period of some years, seems destined to again be put upon trial. Rosenblatt, in Vratch (Nouveaux Remèdes, Feb. 8th, 1891), reports a case of diabetes in which there was marked amelioration of the symptoms, and a diminution of the amount of sugar in the urine. The drug was administered in the form of powder, 3 to 15 grammes in twenty-four hours, and the fluid extract 3 to 22 grammes daily.

For the "Grippe."—Dr. E. R. Palmer, of Louisville, says that with the recurring prevalence of the so-called "*grippe*," he suggests the following as a specific for adults in such cases:

℞ Salol, ʒiij.
Phenacetin, ʒij.
Quiniæ salicylat., ʒj.

M., ft. cap. xx. Sig. Two every three hours.

—*American Practitioner and News.*

Vinegar for Urticaria.—After trying many remedies in a severe case of urticaria, Mr. Swain found a vinegar lotion gave almost instant relief, and subsequent trials in other cases have been equally successful. One part of water to two parts of vinegar is the strength most suitable.—*British Medical Journal.*

Medical Progress.

Amyl Nitrite as an Antidote to Chloroform.*—In the Medical Record of August 16th, 1890, is a brief report of Prof. Wood's address on "Anæsthesia," delivered before the International Medical Congress. Regarding the treatment of chloroform poisoning, it is stated that "the author's experiments proved that amyl nitrite, caffeine, and atropine were of little use." This opinion might have been even more comprehensive with a qualification, and it might have been said that in many cases of impending death from chloroform no known remedies are of any avail, especially if there is any delay in their administration. The motto, *bis dat qui citò dat*, could never be more appropriately placed than in such surroundings. Some time since I wrote to a physician, who was present at a case of death from chloroform, in which it was stated that the nitrite of amyl was used in vain, for the purpose of inquiring the details of its administration. The reply was that the drug was "used very late, and when all chance of being of any service was apparently over." When the advent is so rapid as sometimes occurs after the inhalation of chloroform, every lost instant may prove the cause of a fatal result, and any remedies to be of use must be applied immediately. The opinions and experiments of others on this subject. as well as my own studies and experiments in the same direction, have led me to believe that with arrangements for prompt administration of amyl nitrite, lives may be saved which otherwise would be lost, and that there is an essential antagonism between the effects of the two agents.

Professor Wood regards digitalis as of all remedies the most powerful in stimulating the circulation, and an opinion from such a distinguished source, based on study and experience, cannot but be received with due consideration. I have not seen the report of any cases in which digitalis has been used as an antidote to chloroform, and can only depend upon this statement as to its properties. Like the amyl nitrite, digitalis also dilates blood-vessels. Whether digitalis acts with that remarkable rapidity which is characteristic of amyl nitrite, I do not know; digitalis has the disadvantage of requiring the hypodermatic syringe for its administration, while amyl nitrite can be given hypodermatically or by inhalation.

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*Abstracts of paper by F. A. Burrall, M. D., New York Medical Record, April 4th, 1891.

I have long been interested in amyl nitrite, and there is an unusual attraction in the promptness and positiveness of its effects, which has secured for it a permanent place in the materia medica. I was the first to suggest the use of it as an antidote to the syncope of chloroform, in a communication to the New York Medical Gazette of June 11th, 1870. In another article to the Medical Record of July 20th, 1878, on the use of nitrite of amyl in chloroform poisoning, I further took the view that "the effect which it exerts of overcoming stasis seems to be its most important function. While in the syncope arising from chloroform, the nitrite of amyl exerts its antidotal properties by opening the arterial channels and admitting blood to the brain, in asphyxia, the pulmonary stasis is also overcome, and arterialization follows."

In looking over the medical journals, I have met with reports of a number of cases in which it may fairly be claimed that death from chloroform inhalation has been averted by the use of amyl nitrite.

The experiments of Schuler and Pick have shown that chloroform causes contraction and diminished pulsation of cerebral vessels, while amyl nitrite produces relaxation of all unstriped muscular fibre, especially that of blood-vessels, and causes their rapid dilatation. Schiff found, also, that vascular often precedes respiratory paralysis, as a result of the inhalation of chloroform. In Dr. J. A. McWilliams' experiments made on cats for the purpose of investigating the comparative effects of ether and chloroform, he found that three cats collapsed suddenly, while respiration was going on regularly and efficiently. "The pulse was found in each case to be imperceptible, and after respiration had gone on for some time, the heart was found in each case, on opening the chest, to be contracting so feebly as to be entirely ineffectual in propelling the blood. As a general rule, however, in death by chloroform, respiration ceased before any such failure of the heart's action as to be incompatible with life." It was also found that "an amount of chloroform that could be given with safety during quiet respiration speedily produced alarming symptoms when respiration became rapid and deep." Further than this, it was observed that dilatation of all the cavities of the heart frequently occurred at an early period of the administration of the anæsthetic. This was usually accompanied by a fall of blood-pressure, but there was no interference with the regularity of the heart's action. Firm compression of the abdominal aorta was the most effectual way of increasing the blood-pressure in the carotids when it had fallen to a dangerous degree.

In deciding upon remedial measures, we must depend on both the observations of scientists and the teachings of clinical experience. With such light thrown upon the action of chloroform, let us suppose that a patient who is inhaling chloroform suddenly develops dangerous symptoms. Of such symptoms a tendency to fatal syncope is the most frequent. What conditions are present under such circumstances, and what shall be done to avert a fatal issue? We may hold that the cerebral vessels are contracted, and the central nervous system is losing the blood supply on which its activity depends. Circulation and respiration are faltering, and death may occur suddenly at any moment. It is not a time for the application of any one method or remedy, but all the usual aids, as well as the reserves of science, should be immediately employed. The first indications are to revive circulation and respiration, since what arouses one seems to awaken the other. I think that, as nearly simultaneously as possible, the head should be lowered, the neck extended, nitrite of amyl given hypodermatically or by inhalation, and artificial respiration practiced by the Sylvester method, since this method is the most convenient. It should not be forgotten that pressure on the abdominal aorta increases the blood-pressure in the carotid. If asphyxia be present, it would seem that the neck should be extended, and the head raised higher than the feet.

This paper would not have made its appearance, as I have already written several articles upon the subject, but I thought it a good opportunity to bring forward these cases in which amyl nitrite has saved life, and thus present the claims of a drug which, up to the present time, has a better clinical record as an antidote to chloroform, than any other with which I am familiar.

THE TREATMENT OF FELONS.—Dr. Daniel B. D. Beaver, in University Medical Magazine states:

That two features in the treatment of felon, which aboye all others determine the course of the disease, are undoubtedly the character of the incision and the time at which it is made. In my experience, delay of the incision to the end of two days from the beginning of the pain, has nearly always resulted in extension of the disease that necessitated very free use of the knife, and in the deep-seated variety of the disease, more or less involvment of the bone, with much destruction of tissue, and slow recov-

ery. The alternative—to cut whenever suppuration is inevitable—seems a more timely procedure, but then how is the inevitableness of suppuration to be recognized before it has already occurred?

The most definite instructions upon this point have probably been given by Dr. Agnew in the last edition of his Surgery, in which he says: "The knife should never be withheld under the impression that suppuration has not occurred. The incision should be made as soon as the nature of the disease is recognized, or the dusky-red swelling and throbbing pain are present."

The presence of this characteristic swelling and pain is undoubtedly the early and decisive indication for an incision, and in the deep-seated form of the disease it should be made as soon as it appears; but that it should be made deep and long, as some say, at this early stage is questionable. There is no necessity for laying open a finger the whole length of a phalanx and making a wound that will require a week or ten days to heal in order to let out a single drop or less of pus.

An unfavorable experience in cutting liberally for felon in the early stage, led me to seek means of locating accurately the centre of the morbid process and simply puncturing it with a small instrument. For a number of years I used an ordinary tenotome, but this, as usually furnished by the instrument makers, is too heavy and too much wedge-shaped, and for this reason causes much more pain than a lighter sharp instrument. During the last five or six years I have used for this purpose a straight bistoury, about half again as heavy as a well-made Gräfe cataract knife.

In that form of the disease which begins as a periostitis, which is the most painful, most destructive, and in which the earliest incision should be made, the point where pus will form, or is already present, can be accurately defined by pressure upon the swollen part with the end of a small probe. By pressing the end of the probe gently upon different parts of the swelling, one point, usually near the centre, will be found more sensitive than all others. Upon deeper pressure at this point the patient will say: "It hurts down to the bone," while around it deep pressure is better borne. Upon this most tender spot, down on the bone, is the seat of the disorder, and it must be reached by the knife. A light blade with a sharp edge and point can be pushed down to the bone, and when it reaches it, the handle tilted in the direction of the edge so as to make the opening funnel shaped without inflicting very severe pain; while with a heavy, dull knife the pain of the operation is excruciating. If the point of the knife penetrates the focus of the disease within twenty-four hours of the onset of the pain, there may or may not be seen on the end of the knife, upon the withdrawal of it, a bead of pus, but in either case the finger will be well in a day or two.

THE TREATMENT OF CANCER BY THE INTERRUPTED CURRENT.—Cancer, according to the view adopted by Dr. J. Inglis Parsons, "consists of new cells formed during the process of repair or inflammation, and which, in an active state of proliferation, have escaped from the control of the nervous system." They are thus less able than normal tissue-cells, which own subjection to a nervous government, to resist any destructive influence brought to bear upon them. And in the interrupted current, the author believes that he has found an agent that is capable of paralyzing the activity and effecting the destruction of the cancer-cells. The processes on which the hypothesis rests are carefully explained and the reasoning, by which the conclusions arrived at are established, is well sustained. The occurrence of malignant growths under conditions of nervous depression, and at sites of constant irritation, is held to be strongly corroborative of the theory put forward, and a further argument in its favor is claimed in the failure of attempts hitherto made to associate the ætiology of cancer with the germ theory of disease. The absence of nerves from cancerous tumors, and the corresponding deficiency of recuperative power possessed by them as compared with strictures amenable to the influence of the trophic system especially, deprives the cancer-cells of resisting injury applied to them, and the agent best calculated to inflict the requisite degree of damage is, Dr. Parsons considers, Voltaic electricity. He has now carried out this mode of treatment in a large number of cases of unquestioned cancer, in many with undoubted relief of prominent symptoms, particularly of pain; in a considerable proportion with the result that an arrest of malignant growth has undoubtedly been effected for varying periods of time; and in some with apparent complete stoppage. The precautions to be observed in carrying out the treatment are to secure a high intensity of current rather than a large quantity of electricity, and that the operator should be completely master of his instruments, being able to test them, and competent to make good any defect in their working. The battery required should be

capable of sending five hundred milliampères through a resistance of eight hundred ohms, though the full force of such an instrument is not likely to be called into requisition by any case. Stress is laid on the importance of recognizing that varying degrees of resistance will often be encountered in the same tumor, and that hard and soft varieties of cancer possess correspondingly high and low powers of resisting the current applied to them. Heart-disease is described as a contra-indication in some cases, but not in others, the strength of the current having to be regulated in accordance with the existing weakness in this respect. A number of cases in which the electric treatment has been adopted are reported in the communication referred to, and the advantages claimed for the treatment are: first, The absence of shock after an application of the remedy: second, The facility with which it can be repeated in cases of recurrent cancer: third, Its applicability to cases in which the disease is beyond the reach of the knife: and Fourth, the ease with which the whole extent of the disease can be got at in an early stage, comparing thus most favorably with other methods in use.—*Provincial Med. Jour.*

A New Treatment and Possible Cure for Cancer.—J. Mortimer Granville writes the editor of the London Lancet as follows:

I wrote you in June and July, 1889, communicating a method of treating cancer, which I believed to be likely to prove useful. I did not then dare to say more than that "the results obtained so far are encouraging." The time which has elapsed since making this statement has been employed in watching the effects and issues of the treatment, and in ivestigating the facts in other cases which have fallen under my observation, and been similarly treated. I say similarly, because later researches have led to considerable changes in the mode of exhibiting the remedies. In result of my experience to this date I am able to say: (1) That none of the earlier cases have relapsed: (2) That scirrhus tumors of large size and undoubted authenticity have gradually disappeared without any operative interference: (3) That the health of patients has improved under treatment, and the cachexia vanished.

I fully recognize the gravity of these statements, and I feel the responsibility that rests upon me in making them; but in the face of the evidence I have obtained I am compelled to say that I tentatively believe cancer to be curable by this method, and I have no hesitation in again asking the profession to try it.

The exhibition of the remedies—which must be used in combination, for the reasons assigned in my previous letter—requires to be specially adapted to each individual case, as will be obvious to anyone who has given the *modus operandi*, as before explained, a serious thought.

The principal modifications I have made are the following:—Instead of "thallin" I use a periodohydromethyloxychinolin, because that is better borne, and seems to be more effective than the tetrahydroparaquinanisol; and I either inunct, or inject, the tumor with a papain specially prepared, because I have reason to believe that it is not the proteid elements (either the globulin, the α-phyt.-albumose, or β-phyt.-albumose, or these in combination), but the organized ferment of the papaw juice that produces the effect as observed.

The scientific explanation of the phenomena (which I am still investigating) would involve too much of the bacteriological phase of the subject to be discussed here; meanwhile I reserve, until another opportunity, the expresssion of an opinion which I have formed as to the important part played by the papain bacillus, of Rosbach, to whom, as your readers will remember, we are indebted for our acquaintance with the properties of papaw juice, by a paper read at the International Congress of 1881. I am aware that some authorities have alleged that the bacillus found in papain is identical with the bacillus subtilis, but I believe that conclusion to be erroneous; and at the proper time and place I shall be prepared to make my assertion good. However that may be, of the therapeutic value of papaw juice, or certain of its elements, as a solvent of the morbifically indurated tissues in cancer, I have no doubt, although, as I said at the outset, it is perfectly useless unless administered or applied in combination with an adjunct of the class which I have previously indicated.

The Color-Cure of Cancer.—The idea has come into the mind of more than one worker in pathology and the art of healing, that the dye which stains so beautifully pathogenic microbes and the cells and nuclei of diseased tissue outside of the body, might be turned to good account in treatment. In theory the idea is excellent. If a staining fluid will attack bacilli in living tissue, and render them incapable of making further injury, or by penetrating to the nuclei of pathological cells, cause these cells to cease their multiplication, we have at once a treatment which strikes in a most scientific manner at

the very root of the evil. Sad as it is to make the admission, theory and practice are twins which are no more alike than though they were distant relatives.

Professor von Mosetig, of Vienna, conceived the idea of staining the cell nuclei of inoperative neoplasms, and thus leading to arrest of development, or possibly to necrobiosis. Methyl-violet or pyoktanin is the coloring agent employed, and injections are made with solutions of from one in 200 to one in 500.

The results, so far, as recorded in the original communication, published in the Wiener Mediz. Presse, No. 6, do not show any cures, but a number of extensive malignant tumors have been much reduced in size, and improvement has been marked. In a subsequent communication to the Vienna Society of Physicians, Mosetig further reports upon sixteen cases of carcinoma and sarcoma treated by his method. A solution of one to 500 has been found sufficient; but he advises that it be filtered through heated asbestos, and the injections made in a concentric manner from the healthy surrounding tissues. From three to six grammes can be used at one sitting.

No bad effects have been observed from parenchymatous injections even when made in parts richly supplied with blood-vessels, and Ehrlich has injected methyl-violet into the blood-vessels of rabbits without injury. The effects are said to be produced by softening, fatty metamorphosis, and resorption, in non-ulcerating growths, where the skin is intact. Professor Billroth has employed the method in some thirty cases. In three instances of non-ulcerating sarcoma the softening process was followed by ulceration, and this was looked upon as an indication of injurious effect. There was no evidence of resorption.

In carcinoma no beneficial results were obtained. According to Billroth, the effects are due simply to the swelling-up properties of the injected water, and he has ordered at his clinic that the injections shall be interrupted as soon as softening is noted, and only begun again if shrinking takes place. In this way, however, treatment is rendered slow, and in the meantime the malignant tumors grow rapidly.

It would appear from reports already published in the Record, that the method is meeting with some favor here, and, as it is being tried in several quarters, we shall hope soon to present to our readers something more definite regarding it.—*Medical Record.*

THERAPEUTIC APPLICATION OF ELECTRICITY.—Dr. A. D. Rockwell contributes an article on "The Different Physiological and Therapeutical Properties of the Induced Currents of Electricity," to the Medical Record, February 14th. He summarizes his conclusions as follows:

1. From the continuous-coil apparatus, owing to its combination of helices, the wires of which differ in thickness and length, proceed four qualities of current that vary in a most remarkable degree in all the properties of electricity—physical, physiological, and therapeutical:

2. That the variation is observed most markedly when applications are made internally to the vagina, uterus, rectum, or bladder, by the bipolar method:

3. From the primary or first induction coil we obtain a current of quantity that is barely perceptible externally, but internally, and especially by the bipolar method, acts with greatly increased efficiency:

4. From the combination of the primary and secondary induction coils we obtain a current of greater tension, but which still acts mildly when applied externally. Applied internally, however, its effects are far greater than the first coil, both in exciting the sensibility and contractility, and the utmost caution must be exercised in its use. In the same degree, also, it acts upon the vagina, rectum, bladder and testes. This current is especially applicable in the treatment of enlargements of the uterus due to sub-involution, but is of little or no value when the enlargement is due to fibrous tissue. It is of especial value in post-partum hæmorrhage, and from its power to excite the sensibility and contractility of the bladder and rectum, it may be used with good effect when these organs are anæsthetic, or suffer from diminished or lost contractility:

5. From a combination of the first, second, and third induction, we obtain the maximum power to excite both sensibility and contractility on the external surface of the body, each additional coil simply giving a decreasing power over sensation and contraction. Applied internally, however, it acts far less powerfully than either of the two previously named currents; but in the ordinary forms of paralysis of voluntary muscles it will more readily call forth contractions than the current from any other combination of coils:

6. From the first, second, third and fourth induction coils combined, a current is obtained, differing from and superior to all the others in its sedative and general tonic effect upon the system at large. It neither acts upon the sensibility nor muscular contrac-

tility when applied externally as does the third current of the series, nor with a tenth or even a twentieth part of the acuteness when applied internally, that characterizes the second current of the series. For the purpose of general Faradization, however, it is the only proper current to use, and for applications to the vagina and uterus, for the relief of many forms of pain, it possesses properties that are invaluable.

The Use of Suppositories.—My attention was recently called to the insolubility of suppositories. I made an autopsy on the body of a woman who was supposed to have died of carcinoma. The case presents some interesting features aside from the fact that I found no fewer than six suppositories between the rectum and the transverse colon. They were hard, flattened, and elongated; some imbedded in fæcal matter and some quite free and clean, These suppositories were made by a well-known firm in Philadelphia, and were supposed to contain morphinæ sulphat., gr. ss.; atropinæ sulph., gr. $\frac{1}{100}$. There is no doubt in my mind that they contained wax, and but a small amount of cacao butter. They are put up for the trade, and will remain hard during the summer season. This woman died from the effect of morphine. Her suffering was intense, and the attendant introduced a suppository; and in an hour another was introduced, and within an hour more a third one was pushed into the rectum. I am of the opinion that they were only partially dissolved; but the aggregate amount of morphine liberated during those two hours was enough to produce death. Another interesting feature in the case was this: The patient had a tumor appear in the left mamma. She persuaded herself it was carcinomatous, although her family physician had told her it was not a malignant growth. Feeling satisfied, however, that it was a cancer, she went to an institution in the central part of New York State and had it removed by means of plasters. In about a year's time she began to suffer intensely with pain in the abdomen. She was then convinced that her vital organs were being eaten out by cancer. She was examined by several eminent surgeons, and they all expressed an opinion that she had no cancer. She had made up her mind that she had, and died believing that her organs were destroyed by this dreaded disease. The autopsy showed every organ to be normal, and no trace of carcinoma could be found. Her pain was probably of a neuralgic nature, as she often suffered from neuralgia in the face. These tumors in the colon could be distinctly felt through the abdominal wall, and, before opening the body, it was the general opinion that they were growths of some kind. I would state that she had an enema about four hours before death, but it is very evident that it was not enough to bring away these masses of wax. In conclusion, I have to say that the practitioner who uses other than a freshly-made morphine suppository subjects his patient to the dangers of morphine poisoning, if not death.—Dr. N. L. Wilson, in *N. Y. Medical Journal*, March 14th, 1891.

Camphoric Acid in Night-sweats.—Within the last eighteen months Combemale has published the results which he has obtained from the employment of camphoric acid and the tellurate of sodium in the treatment of the night-sweats of phthisis, or those dependent upon some other severe systemic disorder. I have been so frequently misled by the enthusiastic reports of clinical observers both in Germany and France as to the value of some new remedy which they had tried, that I must confess to have taken up camphoric acid with a considerable degree of prejudice against it. I have studied its action, however, very carefully in the wards of St. Agnes's Hospital during the last six weeks, and I am now prepared to most thoroughly endorse everything which Combemale has said about this drug. I believe it to be of greater utility than any of the remedies which have heretofore been generally employed, such as atropine, aromatic sulphuric acid, and sponging with alum or sulphuric acid water, or similar preparations. Altogether, I have given it to about ten cases, and in every one of them it has acted, even if given in moderate doses, most satisfactorily.

When we consider that the dose of twenty grains of camphoric acid is only a third of what may be given in cases where this dose fails, namely, sixty grains, it becomes evident that the drug requires a more general trial by the profession, and that it will probably take a prominent place in the list of our materia medica. It is absolutely devoid of taste, insoluble in water, and comes in small micaceous crystals, which are soluble in alcohol. It does not produce the gastric irritation and burning produced by camphor, and in none of the cases in which I have used it has it ever occasioned any distress or untoward symptoms.

As yet I have not had an opportunity to test the therapeutic activity of the tellurate

of sodium, and I can say nothing, therefore, in regard to its value. Combemale states that, while it is useful in night-sweats, it is not equal to camphoric acid in power; and I am so well satisfied with the latter drug that I shall only try the tellurate of sodium when I find a case in which camphoric acid fails. —H. A. Hare, M. D., Clinical Professor of Diseases of Children in the University of Pennsylvania, Physician to St. Agnes's Hospital; in the *Medical News*, April 4th, 1891.

Treatment of Asthma in Children.—Dr. Blache, in the Bulletin Medical, January 14th, 1891, points out the indications in the treatment of asthma occurring in children. At the onset of the attack, inhalations of the smoke from burning leaves of belladonna, hyoscyamus or stramonium, from nitre paper, inhalations of oxygen or of iodide of ethyl, should be tried. These failing, a hypodermatic of a little morphine will at once relieve the dyspnœa. Morphine, however, must be used with great circumspection in children. Belladonna, on the other hand, is well borne, and its use may be continued for a long time; a sixth of a grain of the powder or extract may be given daily. The tincture of lobelia is well borne in large doses; beginning with twenty drops, the dose may be gradually increased to three drachms in twenty-four hours. Good results have been obtained with the tincture of grindelia robusta, which has also been said to be a specific in whooping-cough; from fifteen to twenty drops may be given at a dose. Inhalations of the vapor of pyridin, as recommended by Sée, mitigate the severity of the paroxysm.

In the curative treatment, the iodides, and especially the iodide of potassium, hold the first place. Their efficacy depends upon an influence upon the brain and medulla, regulating nervous discharges. If the iodides are not well borne or if symptoms of iodism occasion annoyance, tincture of grindelia, arsenic, or inhalations of pyridin or of compressed air, may be substituted.

If the asthma be the result of a diathesis of rheumatism, gout or malaria, or due to disease elsewhere, as in the nose or pharynx, treatment must first be directed to these ætiological factors.

To these suggestions may be added a reference to the recommendation of euphorbia pilulifera, made by Dr. M. Graham Tull, in the Medical and Surgical Reporter, March 16th, 1889, and May 18th, 1889. This drug seems to have a powerful influence upon the course of asthma.—*Medical and Surgical Reporter.*

Cure of the Opium Habit.—Dr. Cottel states, in the American Practitioner, that he has obtained a positive cure in forty cases of morphine addiction by means of the following "mistura diabolica:" Morphine sulphate, a variable amount; fluid extract of viburnum prunifolium, four drachms; elixir of ammonium valerianate, three ounces; elixir of sodium bromide, two ounces and a half. The dose is a teaspoonful as required. The amount of morphine is a diminishing one, beginning at a point somewhat below that which has been taken habitually. Tincture of opium may be substituted for the morphine with advantage in some cases, the size of the dose being proportionately increased. The bromide of sodium is in the proportion of five grains in each drachm of the elixir. The mixture can be readily given up after the morphine is dropped from it. This plan of treatment involves the gradual withdrawal of the narcotic in cases where there is a bona fide desire to be cured. The writer adds: "I am confident that no case is incurable, however chronic, provided the general health is fair." The main point will be to win the confidence of the patient in the physician's power to cure him. He recommends concealing from the patient the fact that the mixture contains morphine. It is well not to hurry the reduction of the dose of morphine; in chronic cases, or those of persons who have been taking ten grains or less daily, the patients will not usually notice the abstraction of a grain each week, although some must be dealt with even more patiently than that. In smell and taste this mixture is truly diabolic, and many patients will say they can do without the horrible stuff long before the time estimated, as required for the withdrawal, has been consumed.

Treatment of Fissured Nipple and Engorged Mammary Gland.—Painting with tincture of benzoin, while an excellent procedure for small superficial cracks of the nipple, is perfectly worthless in more advanced cases.

The writer has found in hospital and private practice that excellent results can be secured in bad cases by the application of an ointment made up of equal parts of castor-oil and subnitrate of bismuth. This mixture makes a very smooth, soft ointment, which relieves the pain, and is an excellent protective to the part. Before application, the nipple and surrounding skin should be carefully cleansed and disinfected, and then the ointment should be smeared on plentifully. If it is necessary for the child to

nurse from the affected nipple, it can be allowed to do so without the necessity of removing the ointment from the nipple, as must be done if tannic acid or the salts of lead are used. This is a serious disadvantage of many forms of treatment recommended for fissured nipple, for the irritation of removing the substance employed as a local sedative neutralizes the action.

For the engorgement and pain in the mammary gland itself the author advises cloths wet with lead-water and laudanum, frequently renewed and kept in place by a binder or bandage, which also supports and compresses the breast. A breast-pump must be used or a glass nipple with a rubber tip. —Dr. C. B. Hirst in *University Med. Mag.*

Effect of Medicaments Given to Nurses upon the Milk and the Nursing Child.—If thirty to forty-five-grain doses of salicylate of soda are given to the mother, and the child nursed about an hour afterwards, the drug can be detected in its urine for a short time. No trace of it remains at the end of twenty-four hours. Iodide of potassium gives the same results, only the elimination takes sixty-two hours in the child, forty-four in the mother. At the end of twenty-four hours the milk still contains some of the drug. Ferro-cyanide of potassium appears in the maternal, but not in the child's urine. Iodoform, applied for a long time to the vagina or vulva of the mother, causes iodine to appear in the milk and urine of the mother alone. The amount of mercury transmitted through the milk is very small and variable. The influence of the maternal diet is almost nil. As to the effect of opium, Tornhill claims that it narcotizes the nursing child. Fehling has observed neither narcotism nor constipation. Relatively large doses of morphine have no effect on the child. Chloral in from fifteen to forty-five-grain doses does not seem to affect the child through the milk.

The sulphate of atropine, in sufficient doses to distinctly affect the mother, causes a dilatation of the pupil in the child, which disappears in twenty-four hours.

In most instances a febrile state in the mother has no effect on the child, but a persistent high temperature in the mother is apt to excite a similar febrile state in the nursling.—*Le Poitou Méd.*

Treatment of Intercostal Neuralgia. —Menard treats intercostal neuralgia by applying a blister over the painful spot; by painting the part with iodine; or by the use of hot and cold douches. At the same time, if the pain is severe, he administers small doses of opium, or even hypodermatics of morphine. Sometimes atropine or chloroform may be needed, and frequently soothing liniments have to be applied. The causes of intercostal neuralgia are numerous, and the condition which provokes the pain must be discovered and removed. If it is due to anæmia, Menard advises a course of baths, accompanied by the use of one of the preparations of iron. On the other hand, if the neuralgia be due to rheumatism, the salicylates, analgesin, or diaphoretics, must be resorted to; and if the case is a chronic one, sulphur, alkaline, or thermal baths should be adopted. Venesection, however, in the majority of cases gives excellent results. In other instances, iodine ointment applied to the wall of the chest, protecting the clothing by means of an adhesive plaster, seems to do great good.—*Maryland Medical Journal.*

Benzo-Phenoneite, New Remedy in Ophthalmology.—Dr. Galezowski, having obtained good results from the employment of yellow, or auramin pyoktanin, in the treatment of the atonic ulcers of the cornea, and the mode of preparation of this product not having been published, has caused to be prepared by beginning with anilin, but without indicating the operations to which this substance has been subjected, a substance having nearly the same physical and chemical properties as pyoktanin. This substance, which is soluble in water, has received the name benzo-phenoneite. This medicament has been tested with success by M. Galezowski in the treatment of ulcers of the cornea and in keratitis.

According to a communication made by him to the Society of Biology, in its session of December 27th, 1890, he employs an aqueous solution (1:100) by means of which he profusely laves the cornea with the aid of a brush; the lavage must be repeated every two hours.—*Répertoire de Pharmacie.*

Therapeutic Effects of Diuretine.— The drug certainly produces a rise of blood-pressure. It is not only a diuretic, but has an action on the heart. It gives remarkable results, especially in cases of "asystole," without valvular incompetence. When the heart-muscle is diseased, the diuretic effects are much less marked. Diuresis is much more abundantly produced in acute than in chronic nephritis. Albumen is never increased as a consequence of the administration of diuretine. No diuresis followed its use in the case of cirrhosis of the liver.

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Original Articles.

ALIMENTATION IN DISEASE.*

BY SCHUYLER C. GRAVES, M. D.†

For some time past I have been much interested in the matter of dietetics during sickness, so when the Chairman of your Committee on Medicine came to me, a few days ago, with the request that I prepare a medical paper for presentation before the Society, I cheerfully acquiesced, promising to do so, although time was very limited both as regards the date of the meeting and the professional occupancy of my own hours.

Under the circumstances, therefore, you will, of course, expect a modest effort and it has been my aim to couple such modesty with terseness.

The subject of dietetics in disease is an old one. I will not burden you with historical references; but simply state a most radical change has come over the spirit of medical practice in this matter within the past two or three decades, and the physician who, to-day, would try living up to the old maxim of thirsting and starving fevers would, at least, merit and receive the unqualified disapproval of his—or her—colleagues,

Water is antagonistic to fire, and food will both protect and replace the animal tissues.

It is scarcely necessary for me to state before this assemblage of medical intelligence, that a proper course of feeding during the continuance of a protracted sickness, particularly during fevers, is a most powerful means of producing: First, a great diminution in the wear and tear of tissue-cells, with the lessening of associated emaciation: Second, a much more rapid convalescence as a direct result of the same, and: Third, a far greater probability of successfully passing the crisis in critical cases.

With these premises let me proceed:

In the first place, when we come to consider the subject of prepared foods for the sick, the question of palatability naturally arises and while we admit such quality is a most desired and desirable feature we must, nevertheless, recollect no variety of food can be expected to touch the palate of the sick as it did that of Epicurus of old.

A good square meal of corned beef and cabbage, with potatoes and turnips *galore*, tastes *tolerably well*, and far differently to the sturdy farm-hand as he returns from a heavy morning's labor in the meadows at the blowing of the welcome dinner-horn, than food of any description would, or could, to this same husbandman after he had been wrestling with a typhoid for several weeks. Therefore, we must not expect too much in the matter of palatability, especially when we realize that the greatest degree of palatability, at least heretofore, has been associated with articles of poor nutritive value. The converse of this statement is still more evident, viz., that articles of high nutritive value have often proved to be gastronomically repulsive.

Of course, the ordinary diet of health must be modified for those who are sick, and I can have nothing but praise for such natural food articles, as eggs, milk, toast, and various forms of flesh, either, fish or fowl; but as my object in this paper is to bring into more prominent notice some of the more important prepared foods, so invaluable in the sick-room to-day, I will limit my theme to such articles.

Foods for the sick naturally fall into two classes: 1. Those belonging to the starchy groups of aliments, such as Harlick's Malted Milk, Nestle's Food, the Imperial Granum, Lacto-preparata, etc.; and: 2. Those containing proteid matters, as the various meat extracts.

*A paper read before the Grand Rapids Academy of Medicine, March 30th, 1891.

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We can also group them in a different and, perhaps, a more important fashion, viz.: 1. The undigested or raw products, such as Bovinine, Murdock's Liquid Food, and Liebig's and Armour's Beef Extracts; and: 2. The predigested, as Peptonized Milk, the Beef Peptonoids (with milk and gluten) of Reed & Carnick, and the Mosquera Beef Meal.

Now that the time has gone by when we used to attempt the dislodgment of that evil entity, disease, by jigs, frantic gesticulations, and the most outlandish combinations of sound possible, and have arrived at a full realization of the fact that disease is physiology gone wrong, physiology the slave of unpropitious circumstances, in other words, the physiological activity of the organs and tissues under unfavorable conditions, we connot but see that the ailing body not only needs a continued supply of material containing the constituents of our tissues, but also requires that such material be in a concentrated, liquid, easily-digestable, and easily-assimilable form. A predigested proteid and palatable preparation, then, is a *sine qua non* in the therapeutics of to-day.

Bovinine and Murdock's Liquid remind the patient of blood, and I have never found them tolerated to any degree. They, also, are not predigested.

Liebig's and Armour's extracts I have used much, and have been fairly well pleased with them. They, likewise, are strangers to predigestion, are too odorous, and, being the products of watery extraction, must be devoid at least of some of the ingredients of the beef from whence they sprung, as is the case with ordinary domestic bouillon or beef-tea. They are more stimulant than nutritive.

Peptonized milk is bitter, and unless exhibited per rectum or treated with the vegetable pepsin soon to be mentioned, is decidedly unpalatable. Of course, rectal feeding is to be avoided as much as possible.

The beef peptonoids of Messrs. Reed & Carnick I positively cannot get patients to take. They simply won't have them—the odor and taste are too strong.

Last of all come the Mosquera beef preparations.

Powdered meat preparations, I am aware, are no new thing in the market; but they have not been a success heretofore. The factors which enter into the problem are not few in number, chief among them being the securing of a digestant unassociated with the development of a bitter taste or a disagreeable odor in the product.

The vegetable pepsin which has been discovered in the juice of the pine-apple, seems to have supplied this want. At any rate, the Mosquera method of predigesting fresh beef with the pine-apple juice, then desiccating, and finally pulverizing it, has resulted in the presentation of a product highly nutritious (containing, in fact, all that beef contains, except water), predigested, odorless, and palatable. It can be obtained in two forms: 1. The beef meal, representing in nutritive force, as has been proved, six times its weight of lean beef, and containing 50 per cent. of predigested and soluble matter, in regard to which it can be said that absorption follows upon the heels of ingestion without provoking delay: 2. The beef cacao, which is a mixture of the meal with sugar and chocolate. This form is the least suggestive of a meaty preparation of any product in the market, and when mixed with hot milk makes a delightful chocolate; but it contains only one-third the nutritive value of the meal. I find it very acceptable in the sick-room.

The agents in this country, by the way, for the Mosquera beef preparations, are Parke, Davis & Co., of Detroit, through whom, I am happy to say, I was led to their use in my practice.

In bringing this paper to a close, I beg leave to report briefly a case or two of sickness in which I have been much pleased with the employment of these articles.

Case 1.—Mrs. G. W. G., aged 50; patient lay in a semi-comatose state for three days as a result of meno-pausal reflexes. When roused would semi-articulate. Beef-cacao was the only thing she would take. Tolerated it well and as consciousness slowly returned had a decided preference for it over all other forms of food.

Case 2.—Mrs. T. F., aged 21, eight months pregnant. Taken with symptoms resembling typhoid. Was sick for two weeks. Beef-cacao and beef-meal given freely and were

relished. A teaspoonful of the meal dissolved in a tablespoonful of hot water with a cup of milk and a pinch of salt every three hours. Patient's nutrition impaired.

Case 3.—G. R., a little Miss of 10, sick with diphtheria. The cacao alternating with alcoholics, and in connection with proper medication, seemed to do all that could be desired. Child was very sick but made a good recovery.

Case 4.—Master E. S., aged 16. Typhoid fever. Took regularly of both preparations, particularly of the cacao; was sick four weeks. Nutrition well maintained, the food relished and convalescence rapid.

I might add other cases, for instance those of a purely surgical nature with which I have, perhaps, more to do than with the medical; but I deem the foregoing sufficient to practically illustrate the good qualities of the Mosquera food products.

In conclusion I will say the subject of alimentation in disease is a most important one, and deserves our careful consideration.

Grand Rapids, Mich., March 30th, 1890.

CASES IN PRACTICE.

BY E. P. HURD, M. D.

I.

Obstruction of the Bowels from Stricture of Colon.—Laparotomy, Colotomy, and Establishment of Artificial Anus just Under Umbilicus. —Recovery.

The operation of median, sub-umbilical colotomy is coming more and more into favor for cases of total and irremediable occlusion of the intestines near the lower orifice. An artificial anus in the middle line is certainly more easily managed than one in the loin, and perfect cleanliness and antisepsis are more readily maintained. The patient whose history I am about to relate has now been for nine months, since the operation, in the enjoyment of good health. She has an artificial anus midway between the umbilicus and the os pubis which is kept closed, except at such times when a fæcal motion becomes necessary, by a hard rubber obturator made for the purpose by Codman and Shurtleff, of Boston. This obturator is attached to an ivory plate, which fits accurately over the false anus; is slightly knobbed at its distal extremity; projects about two inches into the gut; and not only perfectly fills the orifice, but prevents cicatricial contraction and closure. This nipple-shaped obturator is removed every morning when there is a movement of the bowels, and readjusted afterwards; there is seldom any subsequent escape of fæces or even flatus, and the patient, a woman of forty-five, does her house work, goes visiting, and within a few weeks has ridden from her home in Amesbury to my office, a distance of four miles.

History.—I first saw the patient, Mrs. G. F. C., of Amesbury about the 10th of July, 1890. She was then suffering intensely from intestinal occlusion. Neither purgatives nor enemata were of any avail. Vomiting was constant.

For two years, Mrs. C. had never had fæcal movements except after purgatives that caused liquid dejecta; the stools were never formed. Would retain an enema of a pint of warm water which sometimes brought away small quantities of fæcal matter. Straining at stool was generally followed by slight, bloody, slimy discharges. No pain; no tumor in rectum. Deep pressure over left iliac fossa revealed to the exploring finger a hard tumefaction; the same was felt through the vagina; the nature could not be determined. Dr. J. Q. Adams, attending physician, diagnosed the case as malignant disease of the sigmoid flexure of the colon. A long flexible tube could be made to penetrate the rectum and enter the colon; it could, in fact, be passed up twelve inches, when it met an obstruction which could not be overcome.

I agreed with the diagnosis, and advised immediate laparotomy with the intent of making an artificial anus in the median line; the colon to be sought for above the seat of the obstruction, and stitched to the skin at the point chosen, and a permanent opening to be then made. There did not seem to be justification for a left lumbar colotomy, on account of the probable high situation and extent of the obstructing cause.

Pending decision of the family, we agreed to give a few purgative doses of calomel and

relieve the pain by starch and laudanum injections.

I did not see Mrs. C. again till the 23d. I ascertained that on the 12th and 13th there had been several tolerably free liquid motions, which gave great relief; for several days patient had been able to take a little nourishment. Then the bowels were again locked up, and vomiting set in. Of late there had been a new symptom, fæcal vomiting. The family had given their consent to an operation.

A new fact on this occasion was elicited respecting the history: Mrs. C. dated all her intestinal troubles from an attack of dysentery, lasting several weeks, which she had in 1887. Never since recovery from that attack had she been free from constipation. Was this a case of cicatricial stenosis?

Laparotomy was performed on the 24th in a thoroughly antiseptic manner by Dr. G. W. Jones, of Cambridgeport, Mass., assisted by Dr. J. Q. Adams and myself, my daughter, Dr. Kate C. Hurd, and Dr. J. F. Spalding.

The general condition of the patient was favorable; pulse and respiration were good; the *facies Hippocratica* had not yet appeared.

The operation was done under a constant stream of sublimate water, 1.2000, from a fountain syringe, the cannula of the syringe being governed by one of the assistants. All instruments, sponges, ligatures, etc., were perfectly aseptic. The abdomen was laid freely open in the middle line by an incision of eight inches in extent. The intestines, as they protruded, were wrapped in cloths wrung out of warm sublimate water.

The seat of the obstruction was found at the sigmoid flexure, which the flexible sound introduced per rectum could be made to enter, but could not penetrate. The intestine at this point was closed by tough, coarctating fibrous bands, the remains, apparently, of an old inflammation and the resulting cicatricial tissue. In fact, the whole of this portion of the bowel was thickened, hardened and contracted. The question which was not easily decided was, whether this was the result of a malignant new formation (scirrhus of the sigmoid flexure), or whether it was simply cicatricial stenosis—one of the rare effects of dysentery? The lesion, of whatever nature, was clearly intra-intestinal; there was no tumor *outside*, no visible ulceration, nor was the intestine bound down by adhesions to the parts in the vicinity.

Such a condition of the intestine may follow ulcerative colitis. "The deep lesions of the mucous membrane," says Leichtenstern (Ziemssen's Cyclop. vol. vii., p. 628), "in the diphtheritic form of epidemic or sporadic diarrhœa, lead, during the often prolonged process of recovery, to marked stenosis, not infrequently, at several points. * * * By the contraction of unilateral cicatrices, the intestine becomes bent; when the cicatrix is extensive and on all sides, the intestine is drawn together in the direction of its longitudinal axis, and thus stiff, callous folds, bands and sickle-shaped projections into the canal, lying one above the other, are produced. * * * It is especially at the flexure of the colon that the stenoses resulting from dysentery are most frequent and most severe."

It was decided to return the protruded intestines into the abdomen; to bring into the wound in the middle line a portion of the descending colon; to stitch it to the integument at this spot by a continuous buried catgut suture, leaving a small part to protrude through the wound; then to sew up the abdominal incision with catgut, three silk sutures being added to strengthen the catgut; then to apply a dressing of iodoform and antiseptic gauze. This was carried out. It was a difficult matter to return the intestines, they were so distended with fæcal matter; this was at length accomplished, and the colon (near the place of obstruction) brought into the wound just below the umbilicus, and held there by a tenaculum till the abdominal wound was sewed up; then a button-shaped piece of the gut was carefully stitched to the edges of the incision by a buried suture which was covered by collodion, and an incision about an inch in length was made in the centre of this imprisoned portion of the colon. The escape of fæces was instantaneous and the quantity, which kept pouring all night, was enormous.

The patient rallied well from this operation, and has ever since that date had sufficiently free movements of the bowels by the artificial anus thus formed. Occasionally a dose of Epsom salt, or some other cathartic, has been required; in fact, stools must be

liquid or semi-liquid to pass readily. When the patient feels an inclination to relieve the bowels, she bends forward in a standing posture over a tin basin, pressed under the abdominal opening—a sponge wet in a little warm water completes the toilet of the occasion. The colon has united with the abdominal parietes at this spot, and a sort of sphincter resembling the sphincter ani has formed. Latterly, as stated above, a hard rubber obturator is constantly worn. The obturator became necessary to prevent the false anus closing; this, in fact, did actually take place during the fall, and I was obliged to renew the opening with a bistoury; this is now fully an inch in diameter.

Nine months have now elapsed since the operation was performed, and as there has been no pain or inconvenience from the obstruction in the sigmoid flexure, it is reasonable to suppose that the cause of that occlusion is not of a cancerous nature, though future developments may belie this opinion.

Some of the older text books on surgery speak of left lumbar colotomy with establishment of fæcal fistula in the loin as an operation of questionable value.

As the patient has no control over his fæces, they have an incessant tendency to escape, thus not only irritating and annoying him, but what is worse rendering him an object of disgust alike to himself and all around (Gross). It is proper to state that the subject of the above history has been in great measure exempt from these evils, and has fairly good control over the movements of the bowels; there certainly is not that frequent escape of fæces and flatus which renders the subjects of false anus in the groin so repulsive.

There is a reasonable probability that the operation which Mrs. C. underwent on the 24th of July, will add years of comfort and enjoyment to her life.

POSTERIOR COLPORRHAPHY.

II. Gustave Simon was one of the first (if not the first) to propose removing the mucous membrane from a considerable portion of the posterior vaginal wall and bringing the two sides of the denuded surface together in order to produce constriction of the vagina and thus give greater support to the uterus in obstinate cases of prolapsus; it is also the proper operation for rectocele and recto-vaginal fistula. In the case of Mrs. A., of Amesbury, on whom I lately operated, assisted by Dr. J. Q. Adams and my daughter, Dr. Kate C. Hurd, all these indications existed; prolapsus uteri had long been a source of trouble, defying treatment by pessaries; there was also rectocele and a fæcal fistula.

Ether was administered, the patient being in the lithotomy position, and by the help of a fenestrated wire speculum, a large quadrangular piece of mucous membrane was dissected from the posterior wall of the vagina; at the vaginal orifice the denudation of the mucous membrane was carried out somewhat upon the perineum and upon the posterior halves of the labia majora. The dissection of the mucous membrane is a matter of no little difficulty on account of the hæmorrhage, and can only be done with safety by the help of two fingers in the rectum, by which the operator forces downward the posterior vaginal wall. His assistant must be expert to pick up the shreds of mucous membrane, and have them ready for the operator's knife; a hot stream of sublimate water from a fountain syringe must be made to play continuously on the incisions. Bleeding, which is pretty free, must be controlled by hæmostatic forceps, it will, however, for the most part stop when the stitches are placed. In the case of Mrs. A., the cut edges were brought together by a continuous over and over catgut suture, reenforced by two silver wire sutures.

This operation, which was performed one month since, seems to have been quite successful; union by the first intention was obtained, and there is now a firm, dense cicatricial band running the whole length of the posterior vaginal wall. The relief from the prolapsus, and the rectocele is as gratifying as could be desired, and it is hardly necessary to say that the fæcal fistula near the perineum no longer exists.

IRRITABLE FISSURE OF THE RECTUM.

III. I have found this infirmity more frequent than one would suppose. Old physicians have told me they have never seen a case. I have certainly witnessed more than twenty well marked cases, when the simple operation

of forcibly stretching the sphincter till all the fibres of the external sphincter were torn through, has given complete and permanent relief. The pain attending this lesion is atrocious, and nothing short of a cutting or divulsion operation has ever in my experience done any good.

The character of this lesion is very easily diagnosed. The patient has a severe aching pain, low down in the rectum, after defæcation; this pain lasts for hours, sometimes all day, is aggravated by purgatives, and does not readily yield to opiates, whether administered per os or per rectum. Examination by rectal speculum reveals a crack or ulcerous abrasion, easily bleeding on touch, just within the anal orifice; this fissure extends through the mucous membrane into the muscular fibres of the sphincter; it does not readily heal, for the sphincter by its contractions will not let it heal. If there be a few hours quiescence of the pain, this is sure to return the next time the bowels act, and a hard movement, attended with straining, brings with it exquisite agony. I have known patients to suffer for twelve hours after such a movement, and only get relief when repeated doses of opium were administered. Such persons will often avoid having fæcal motions as long as possible from dread of the inevitable suffering.

In the earlier part of my practice I used to be greatly puzzled by these cases, and first became enlightened as to their real nature and treatment by reading Van Buren's practical treatise "On Diseases of the Rectum."

A patient on whom I performed the operation of forcible dilatation ten days ago, and who is now free from all pain and perfectly well, had been for two years an almost constant sufferer; had become haggard, emaciated, and cachectic. It may seem singular that so apparently trifling an ailment should cause so much and so constant distress.

In the case of this lady, all that was necessary was anæsthesia by ether, and forcible stretching of the sphincter ani till the fibres of this muscle were felt to tear. The patient was placed on her side, the two thumbs inserted back to back and forced apart till the palmer surfaces were made to touch the tuber ischii on both sides. Then all that remained to be done was to apply a warm carbolic dressing.

I have notes of more than twenty cases similar to the above which I have treated, and in every instance the result has been most gratifying.

Sir Benjamin Brodie, speaks of this disease, under the title of "Ulcer on the Inside of the Rectum." He says it may be found on the posterior part of the rectum, opposite to the point of the os coccyx, and occurs for the most part in persons who have costive bowels and hard stools, the mucous membrane, under these circumstanes, being lacerated by the pressure of hard evacuations. When once produced, this ulcer is very difficult to heal, and, in fact, the only rational treatment is setting the sphincter at rest, either by stretching or by free division with the knife; and surgeons since Brodie's time have been divided in the choice of methods; certainly both incision and dilatation give satisfactory results. To relieve pain is certainly a considerable part of a physician's duty, and he should be especially happy when he can relieve the pain by permanently removing the cause. What a humane and noble sentiment is that of Herzen —may it not well be the animating sentiment of every physician?—*Tout être qui souffre est également près de mon cœur.*

OVULATION AND MENSTRUATION.*

BY GEO. W. WEST, M. D.

In proportion to the incurability of a disease will we find remedies suggested for its relief growing more numerous. In proportion, also, to our ignorance of nature's laws, in certain fields will we find the same ground occupied by opinions and theories.

Individual opinions and theories are as those who "love darkness rather than light," and insist upon remaining in darkness rather than be disturbed by the entrance of facts which might bring light.

The subject of ovulation and menstruation, their dependence or independence, is one of those benighted fields where individual opinions and theories run riot, and where the light of facts gained from research and experience is so perverted as to render un-

* Read before the Tennesee State Medical Society, April 14th, 1891, at Nashville.

certain the supposed certainty that has previously existed.

The topic has so frequently been the subject of communications and so thoroughly discussed by medical men that I do not come before you with new theories, but simply to present for your consideration the prevailing opinions as found by a careful reading of the literature of the subject. I present then a review, because the subject being a theoretical one, yielding little of use to the busy practitioner, and, therefore, not much read, is still of great importance and interest to all who love the science of medicine.

In 1876 Dr. A. R. Jackson, of Chicago, said, on introducing an article on this subject:

Our great need in this, as in many other problems of a physiological character, is an increased number of well observed facts; those which we have thus far are too few in number, and apparently, too contradictory to warrant a definite and entirely satisfactory conclusion.

And this is our condition to-day.

When McDowell operated the first time for an ovarian tumor he demonstrated a disease of that organ and that the abdomen could be opened with impunity.

The discovery of ether and chloroform, later, made abdominal operations more common, and our much beloved Battey entered the wedge which led to the great era in abdominal surgery, when in 1872 he announced his operation for removal of ovaries which were not greatly enlarged. Add to these facts Listerism, and we have the various steps which gradually led up to the now common idea of opening the abdomen and the removal of ovaries both healthy and diseased; but we cry in vain for more light upon the functions of these organs which have become such common property.

The confusion of these terms by the various writers is the first idea with which we are impressed upon searching the many pages that have been written. The definition of each depends upon which theory we advocate, and, hence it is hard to separate the terms themselves from shadows of theories, without which we cannot hope to understand our subject.

"Ovulation," according to Dunglison, "is the formation of ova in the ovary, and the discharge of the same." Dalton goes further, and says:

That the periodical ripening of the eggs, and their discharge from the generative organs, constitutes the process known by the name of ovulation, which may be considered as the primary act of reproduction.

This comprehends menstruation, and, accepting this definition, we would not expect to reach a conclusion other than that they are dependent the one upon the other.

Menstruation is variously defined. In Dalton's Physiology we find:

In the human female the return of the period of ovulation is marked by a group of phenomena, which are known as menstruation.

This definition is not acceptable to a large number of the profession, who believe ovulation and menstruation are separate functions. A more modern theory is this:

A shedding of the epithelium of the body and the fundus of the uterus, as well as that lining the utricular glands near their orifices, accompanied usually by a periodic discharge of blood (Tait).

From Quain's dictionary we find that "menstruation is the periodic discharge of a sanguineous fluid from the female generative organs."

In this article, ovulation will be used to signify the process of ripening and discharge of the egg from the ovary.

Menstruation in its simplest meaning signifies a discharge of blood, epithelium, and glandular secretions, from the uterus, mingled with more or less of the secretions of the vagina and vulva, recurring each lunar month, continuing from three to six days, due to a stimulus which has not yet been absolutely determined, which produces congestion of the entire genital apparatus, and attended by both direct and reflex phenomena, which seem to depend mainly upon the congestion.

Let us consider *seriatim* some of the theories which have gained prominence:

First, is that of Biegel, which claims menstruation is due to an impulse in the genital sphere, an expression of which is sexual excitation, just as there is a regular expression of need for rest, food, etc. Hyperæmia follows, especially in the pelvic organs, and menstruation is the result. This is too ab-

stract and vague, and demonstrates nothing, therefore has but few advocates.

Dr. John Goodman,* in an excellent article, warmly sets forth "The Cyclical Theory of Menstruation," reaching the following conclusions:

(1) That menstruation is the result of a general condition of the vascular system, the local manifestations occurring, as a rule, in the generative organs, from the fact that they are especially adapted, anatomically and histologically, for their display:

(2) That the general disturbance of the vascular system is of a nature to elevate the blood-pressure throughout the entire organism, and arises from a contraction of the muscular coats of the arteries and veins:

(3) That in all probability, when the tension of the vascular system reaches its highest degree, activity is imparted to certain muscular fibres, which, from their collocation and only possible function, must be regarded as accessory to the vaso-motor muscles, and through their co-operation the local phenomena are intensified:

Goodman opposes the ovular theory on the ground that menstruation is presided over by a law of monthly periodicity, which is the resultant and exponent of recurring physiological acts. This law is manifested only in the economy of the female, and in connection with the function of menstruation.

He believes the process by which the monthly ovules are accomplished, is seated in the ganglionic nervous system.

Lowenthal's† theory is, menstruation is a pathological, and not a physiological, process. He believes the ovum is discharged into the Fallopian tubes long before the menstrual discharge, and that it lingers there for some days, so that the decidua cast off is not the one belonging to the last ovum liberated, but to the one previous to it, that is, an ovum gradually descending to the uterus will be caught, not by the decidua discharged during its descent, but by a new decidua formed between the menstrual periods.

Hence, he argues there is no necessary immediate connection between ovulation and the appearance of the menses.

The oldest theory, however, and the one taught in nearly all our text-books, is that of Negner or Pflüger. It says ovulation is the cause of menstruation. This theory has been gradually evolved by different observers since the description of the Graäfian follicle by de Graäfe in 1631. In 1821, Dr. Power clearly enunciated the doctrine of the periodical ripening and rupture of the follicle at the menstrual period, and the discovery by Baer, in 1827, that the follicle was only the enveloping structure of the ovule, and not the ovule itself, that made the rupture an intelligible and significant fact; and this may, therefore, be regarded as the birth of what is known as the ovulation theory of menstruation.

Negner, in 1831, with other observers following him, furnished additional proofs, based upon anatomical observations, tending to show that menstruation was not only simultaneous with, but dependent upon and in consequence of ovulation. As the Graäfian follicle swells, vaso-motor nervous influences are excited, which become diffused through the vascular system and cause congestion. The congestion involves the ovarian circulation, and contributes to the bursting of the Graäfian follicle, the liberation of the ovum, and the consequent hæmorrhage. This, then, is the generally accepted theory; it has stood for sixty years the attacks repeatedly made upon it of personal opinions put forward as new theories.

Jackson* formulates its claims under the following headings:

1st. In the human female, at regular periods of about twenty-eight days, a Graäfian follicle is ripened and usually bursts, discharging a matured ovule, which passes into the Fallopian tube and is transmitted to the uterus:

2d. Coincident with, and dependent upon the maturation and extrusion of the ovule, certain changes occur in the mucous membrane of the uterus which result in a sanguineous discharge from that organ:

3rd. The removal of the ovaries is necessarily followed by a cessation of menstruation.

Jackson, Tait, Barnes, Martin, and many others, assert these claims are not founded upon physiological facts, and from these dissenters I gather the following objections to the theory:

*Am. Jour. of Obst., October, 1878.

†Archiv. Gynæ. Band 24, 1885.

*Journal of the Am. Med. Ass'n, Oct. 4th, 1884.

1st. Observations made upon the ovaries of women who have died during menstruation, or who have been operated upon about that time, do not justify the conclusion that ovulation necessarily accompanies menstruation.

The early writers who advocated the ovular theory mention cases in which the bursting, or recently bursted, Graäfian follicle was found during menstruation, and those observations were an unanswerable argument—they were looked upon as decisive. In more recent years, the extension of these observations does not justify such conclusions.

Lawson Tait*, in observing 49 cases for the purpose of settling this question, makes the following division of them:

1st. Cases, nine in number, where it was evident that menstruation and ovulation were concurrent:

2d. Cases of negative proof against the ovulation theory of menstruation, 15 in number:

3d. Cases, 25 in number, affording positive evidence against the theory:

He then suggests:

As the average period of menstruation is one-seventh of a month, and if this theory of continuous ovulation is correct, out of 49 observations we ought to have seven instances of ovulation observed during the menstrual period, and in the above table we have nine. * * * In such a case as this, the want of proof is quite as strong for the purpose of a presumption as the presence of direct testimony. To the 25 cases of positive evidence against the ovulation theory of menstruation, we must really add the 15 negative cases, and then we have the overwhelming case against the theory that, out of a continuous and consecutive series of observations, we have the theory inapplicable in nearly 82 per cent. of the cases.

Dr. Annie Clarke† reports 28 cases from which accurate observations, microscopical study and full notes were taken, and the following conclusions reached:

Group 1. Cases which go to show that menstruation and ovulation are concurrent, three in number:

Group 2. Cases which go to show that ovulation is continually progressive, and not coincident with menstruation, seventeen in number:

Group 3. Cases doubtful, eight in number.

This testimony, therefore, corroborating that of Dr. Tait. Dr. A. R. Jackson re-reads the evidence of the thirteen celebrated cases of Bischoff, which have so often been cited to prove the ovular theory, and deduces the following facts: Two-thirds of the cases prove that menstruation occurs without rupture of the Graäfian follicle, and one-third without even a maturation of a follicle.

As to our second objection: That *from the evidence now before us we can state ovulation does occur without accompanying menstruation.* Ritchie and others have demonstrated fully developed and highly vascular Graäfian vesicles in the fully grown fœtus, and at various ages up to puberty, and that menstruation is not essential, either as cause or effect, of these conditions.

As ovulation is necessary to impregnation, and the latter implies the former, we have in many cases of impregnation occurring without menstruation, which are recorded in our medical literature, a strong argument against the theory that ovulation necessarily implies menstruation. Girls have become pregnant without ever menstruating—even before the time of puberty. Women have borne families of children without menstruating at all, the not infrequent fact of conception occurring during lactation and before menstruation is re-established. Super-fœtation clearly points to ovulation during pregnancy, and without menstruation.

A case is reported of ovulation continuing during extra-uterine pregnancy when menstruation had ceased, as was shown by the ripe Graäfian vesicle and recent corpus luteum seen on post-mortem examination, death having resulted from rupture of Fallopian tube at three and one-half months.*

The oft-quoted cases of the French observer de Sinety are interesting in this connection. One of his cases was that of a woman who had not menstruated for five months before she died of phthisis. One ovary contained a ruptured Graäfian follicle. The other was a woman who died at the age of 38, who had never menstruated, whose uterus was infantile and yet whose ovaries showed, by presenting many false corpora lutea, evidence that ovulation had been quite

*Diseases of Women and Abdominal Surgery, page 316.

†British Gynæcological Journal, 1885.

*Slavjansky, Annals de Gynæ., Feb., 1878.

active. Ovulation occurs in animals without menstruation.

An additional objection is gained from the fact *menstruation may occur without accompanying ovulation.* We include under this heading the fact that removal of the ovaries *does not* necessarily determine the cessation of menstruation.

This objection is founded chiefly upon the experience of the ovariotomists, who remove both ovaries and find menstruation continues; or remove the ovaries which were so diseased as to have been incapable of normal ovulation from the body of a woman who had regularly menstruated.

In the first instance the objection is answered by saying the bloody discharge which occurrs every twenty-eight days for years after the removal of both ovaries is not a true menstruation, but a metro-staxis. The answer deals only with the ovular theory of menstruation, and to argue it would be traveling in a circle. When this reply has lost its force, we are told a third or a piece of stroma is left, which is keeping up true menstruation. This answer is good no longer, for many operators have opened the abdomen the second and third time in cases where the ovaries had been removed and menstruation continued without finding either of these conditions.

Menstruation had continued uninterruptedly in cases of double ovarian hernia, where the ovaries upon removal appeared so diseased as to preclude the possibility of ovulation having existed. Those who claim ovulation is the cause of menstruation account for the continuance of the discharge after the removal of both ovaries by saying, it is the effect of habit—the body's memory continues the flow without the stimulus of its original cause, ovulation. This refuted by the fact that those cases which do continue to menstruate may do so after having suspended for several months, and after the idea of habit has been eradicated.

Writers on this subject have always drawn an argument from comparative anatomy by reference to *œstruation*, or the "rut" of animals—those who advocate the ovular theory believe in the analogy between this and menstruation, and they have the same significance; while those who do not believe in this theory appear to prove that œstruation and menstruation are entirely dissimilar. Those who say they are the same base their opinion upon the supposition that sexual desire is increased and that, in some instances, exists only at that time. This is true, without doubt, in oviparous animals in their wild state. Those who deny any relation between œstruation and menstruation say that in animals, signs of ovulation may be found at different times from this œstruation, and that nature suggests this time for conception in those that bring forth but once a year, at the period when the young may be borne, at a time most suitable to their life. They say again, that the increased desire for copulation at these periods does not allow the comparison with menstruation, for at that time such an act is distasteful to both male and female of the human species. In the sexual congress during œstruation of the animal, impregnation almost invariably results, while the same is not true of women.

Tait* says:

If the œstrus and menstruation had much in common, every women would conceive from the first congress after the first resumption of menstruation after each confinement. In fact, if the ovular theory of menstruation were a fact, every woman whose sexual machinery was perfect, and who was living with a healthy husband, would inevitably have a child every eighteen or twenty months; and I am sure womankind are grateful that matters are no worse in this respect than they are. Families would average 15 or 16 instead of 4 and 5, as they do.

The menstrual discharge has been the subject of much speculation as to its origin and nature, whether it was a secretion or excretion, and what were the changes that accompanied it. The source is pretty well agreed upon as being the cavity of the body of the uterus, and that the congestion does not involve the Fallopian tubes and cervix.

Physiologists and clinicians have alike failed to settle conclusively whether the entire mucous membrane is shed with each recurring menstrual epoch, or only certain epithelial layers (Leopold, Jno. Williams, Mönicke, Wider and others); whether the

*Diseases of Women, and Abdominal Surgery, Vol. 1, page 303.

menstrual discharge means an aborted decidua (Pouchet, Ercolani, Tarnier, Putnam, Jacobi); what may be the influence and bearing of the Fallopian tubes in the matter (Harley, Tait) and many other important questions, into the merits of which we have no time to go in detail.

Dr. A. W. Johnstone, of Danville, Ky., read before the British Gynæcological Society, June 23d, 1886, a paper on "Menstrual Organ," which contained some new ideas. He said:

That in the ordinary acceptation of the term the endometrium, above the internal os, is not a mucous membrane, but belongs to the so-called "adenoid-tissues," and that menstruation is for it exactly what the lymph-stream is to the lymph-gland or the blood current to the spleen.

He believes as puberty has an expression in the general system, and particularly the lymphoid organs, so it produces menstruation as the result of a full grown uterus. He decides, with Engelmann, that the mucous membrane is not destroyed, and consequently does not need regenerating between each flow, but that the menstrual organ has a constant growth, the resultant excess of which, by means of an emulgent stream, is poured into the cavity of the body and got rid of through the vagina. He explains the fact that removal of the uterine appendages usually stops the function of this, according to his theory, independent organ, by asking a question:

How is it that section of the chorda tympani practically destroys the submaxillary? Or the excision of a piece of the great sciatic eventually results in the shrinkage, if not in the sloughing, of the whole limb?

He claims, then, that the success of the operation of removal of the tubes and ovaries, to stop menstruation, depends upon the cutting of the nerve plexus embodied in the tube and broad ligament, thus completely isolating the endometrium from the trophic and vasomotor centers which control it, as they do every other organ. If this be true, then we are safe in saying that it is not the removal of the ovary, or the removal of the tube itself, that brings on the change of life, but that it is the neurotomy which the ablation of these organs necessitates which completely isolates the endometrium, and leaves it like the lower limb after the section of the great sciatic.

The conclusions I would draw from this hurried review of a much discussed question are the following:

1st. That the increased familiarty with the pelvic organs, the result of modern surgery, has not materially added to our knowledge of their functions:

2d. That though the ovular theory of menstruation has not been overthrown, yet the weight of accumulating evidence seems against it:

3d. That the most recent observations point to a common nervous origin for both ovulation and menstruation, and yet an individual independence.

CHATTANOOGA, TENN.

THE DANGER OF USING DIGITALIS IN ACUTE OBSTRUCTIVE DISEASES OF THE LUNGS.*

BY F. SHIMONEK, M. D.

The subject, "The Danger of Using Digitalis in Acute Obstructive Diseases of the Lungs," is to my mind a very vital one, and because of my inability to handle it exhaustively I hope it will be thoroughly discussed. My experience with digitalis in acute pneumonia is not very favorable. Of course the results in cases in which it was used might have been just as disastrous without it; but, at any rate, it did not favorably modify the condition, on the contrary, it appeared to me to have aggravated it.

The following are the physiological actions, so far as authorities are agreed about them:

1. Given in large doses it undoubtedly is a cardiac poison, because it brings the heart to a standstill:

2. In doses which just fall short of a fatal effect it produces faintness, nausea, and vomiting, and the heart becomes decidedly irregular:

3. In medicinal doses the heart beats slower and the arterial pressure is very perceptibly augmented:

4. It reduces temperature when the heart's action has been reduced by large enough doses. It seems that by its stimulat-

* Read before the Milwaukee Medical Society, March 24th, 1891.

ing action, either through the pneumogastric or directly on the cardiac ganglia, the ventricular systole is greatly increased, that eventually the heart stops during a systole, and after death the ventricles are found in a tetanized condition.

The chief therapeutic effect, as is well known, is that of a very powerful cardiac tonic, and experience teaches that it is of inestimable value when dilatation is overcoming compensatory hypertrophy, as shown by the venous stagnation in all parts of the body. If this were its only action it certainly would be a remedy *par excellence* in a weak heart from whatever cause; but unfortunately its action on the capillaries, which, through its stimulating effect upon the vasomotor constrictors it contracts, increases the arterial pressure.

It is this action that makes digitalis particularly inapplicable in acute obstruction of the lungs. The increased arterial pressure is due to an increase of blood in the arteries; but the greater tension is produced by the diminished size of the blood vessels which decreases the mass of blood in the arterial system, consequently overfilling the venous system, reducing oxygenation and throwing increased labor upon the right ventricle, which, being already burdened to its utmost capacity, as it necessarily must be in acute obstructive affections of the lungs, endangers life by failing to propel the increased quantity of blood.

It is very evident that obstructive diseases of the lungs increase the labor of the right ventricle to the extent produced by the amount of the obstruction to the pulmonary circulation. The natural conclusion is, therefore, that the severer the inflammatory action is, the less justified are we in giving a remedy whose direct action is to make matters worse.

Increased and labored respiration, cyanosis and weak pulse, are conditions in pneumonia assuredly indicative of very great danger, and death is sure to follow unless we can succeed in diminishing the labor of the heart. Now, it is in just such cases that digitalis has been given, and still is very frequently given—given not only through the mistaken idea that it will support the heart in such an emergency, but because it bears the recommendation of high authority, and for no other reason than that it is a cardiac tonic, judging from its beneficial effect on a dilated heart. Digitalis is administered in such a condition, overlooking the fact that it is not the motive power which is at fault, but the blood which finds hindrance to circulate through capillaries unable to empty themselves.

Dr. Andrew H. Smith says:

1. In acute pulmonary consumption, the danger being from exhaustion of the right heart, the pulse at the wrist does not give reliable indications as to the gravity of the condition:

2. This can be appreciated more correctly by studying the pulmonary circulation by the aid of the pulmonary valve-sound:

3. Marked accentuation of the pulmonary valve-sound indicates a fairly vigorous right heart laboring to overcome resistance in the pulmonary circulation:

4. Decrease of accentuation, with only moderate dyspnœa, indicates decrease of the pulmonary obstruction:

5. Decrease of accentuation and increase of respiratory distress, indicates that the right heart is becoming exhausted:

6. Relief is to be sought by the use of medicines which dilate the arteries and promote a transfer of blood to them from the veins, etc.

Blenler made extensive trials of digitalis in pneumonia, employing usually about half a drachm in infusion daily; this was continued until a decided impression was produced on the pulse. The influence on mortality seems to have been unfavorable, amounting to 21 per cent. under digitalis, and 14.5 per cent. with merely expectant treatment.

Loomis also says it does more harm than good.

In speaking of the use of digitalis in pulmonary affections, but particularly consumption, Dr. Hasack said "Digitalis is a finger which points to the grave." I think this expression may be used appropriately in connection with its use in severe types of pneumonia.

Milwaukee, Wis.

ANGINA PECTORIS.*

Heberden pointed out the coincidence of arterio-sclerosis with angina pectoris, but he did not indicate the relation between this lesion and the production of the attacks. He studied the difference between angina pectoris and cardiac asthma. But Stokes was the first to note the frequence of mixed forms on which the patient sometimes presents an attack of angina pectoris more or less typical and at other times an attack of cardiac asthma; so that two physicians observing the same subject at separate times might each make a different diagnosis, although in the cases of cardiac asthma as well as in those of angina pectoris one would be likely to find equally the lesions of arterio-sclerosis.

It will be convenient to study separately true angina pectoris and false angina pectoris.

Arterio-sclerosis develops under the influence of a general vice of nutrition, and is observed at least as frequently in the rich classes as among the poor. As for the tobacco habit, it may favor the production of true angina pectoris, but it is chiefly in false angina that it plays a considerable ætiological rôle. We also see angina pectoris in aneurysm of the aorta, but it is generally then due to arterio-sclerosis. Syphilis may also be the origin of angina pectoris, as Birch-Hirschfeld has shown, and as has been proved by the results of the specific treatment. There exists generally a particular predisposition which facilitates the production of the phenomena of angina pectoris, and heredity comes in as one of the ætiological factors of considerable importance. On the other hand, bacterial lesions should also be taken into consideration, for Fraentzel has several times observed angina pectoris following infectious diseases.

From a *symptomatological* point of view, it is certain the atypical (masked) forms are the most frequent; often in these cases, cardiac asthma is combined with angina pectoris. The principal symptoms are the anguish, the precordial pain, and the irradiated pain. The pain is seated principally about the middle of the sternum, a little more marked on the left side, and it is generally accompanied by painful irradiations notably down the left arm, but extending sometimes to different plexuses; thus neuralgia of the sciatic nerve, of the abdominal nerves, etc., has been noted.

In the typical cases the attack is sudden; the patient experiences all at once a mortal anguish, a feeling of impending death. He stops abruptly in his walk or in his employment; there is suspension of every muscular effort; but it is not because he is suffering from want of air (as in certain cases of false angina), seeing that the duration of the attack is exceedingly short. Later on, there is an alternation of similar attacks and of pseudo-asthmatic attacks. During the attack and at other times, the pulse is sometimes found to be irregular, but in other cases presents no appreciable change. When the attack of angina is not fatal, it passes off so quickly that the physician is rarely enabled to observe it.

The pseudo-asthmatic form presents itself also in cases of arterio-sclerosis, and sometimes the medical attendant notes the coexistence of mucous râles and the signs of dilatation of the heart. When the heart-sounds present the character of the beatings of the fœtal heart (embryocardia), the prognosis is grave.

In certain forms of the disease the neuralgic pains are wanting, and the paroxysm of angina pectoris is constituted chiefly by the pallor and the suspension of the respiratory movements; that is what is described in France under the name of *angina pectoris without angor*. In other forms associated with stenocardia (constriction of the orifices) the abnormal seat of the neuralgic pains renders the diagnosis very difficult; such, for instance, is the *pseudo-gastric angina pectoris* of the French. In these atypical forms, the number of attacks may be considerable; there may be as many as twenty-six in one day.

In general, the frequency of the attacks seems to be in relation with the degree of stenosis of the cardiac vessels and the degree of enfeeblement of the myocardium. I have seen an alcoholic patient subject to attacks

*The debate at the Tenth Congress of Internal Medicine, held in Wiesbaden, April 6th–10th, 1891, by Dr. A. Fräntel, of Berlin, referee, and Dr. O. Vierordt, of Heidelberg, co-referee.

of angina pectoris daily, obtain marked relief from inhalations of ether.

From the *anatomical* point of view, the English, French, and German writers have shown the frequency of arterio-sclerosis extending to the coronary arteries. They have noted also frequently the occlusion of a part of the coronaries by an embolus, an atheromatous patch, etc. This occlusion produces effects similar to those of thrombosis, *i. e.*, an inflammation followed by softening and necrosis, leading to enfeeblement of the myocardium.

But there are cases where no material alteration can be found, and these have been explained as the result of paralysis of the cardiac centers in the medulla oblongata.

In any event, if the arterio-sclerosis of the coronary arteries represents one of the most frequent anatomical bases of angina pectoris, the nervous system plays an incontestable rôle in the production of the attacks; and the more sudden the attacks, the more likely they are to have a nervous starting-point. Heberden invoked spasm of the cardio-vascular arterial system; Stokes showed the heart was not always in a state of contraction; Parry affirmed the production of a rapid enfeeblement of the heart with dilatation of the walls. The knowledge of the occasioning causes, which almost always consist in an effort of some kind (mounting a flight of stairs, walking against the wind, excess, emotions, etc.), and which all have for their effect an augmentation of the arterial tension, well indicates an essentially unstable state of the force of the heart-muscle, and it is in a lesion of the coronary arteries that in most cases we find the explanation.

As for the forms characterized by the predominance of functional troubles of purely nervous appearance, they should be classed in the category of *false angina pectoris*, whose predisposing causes are neurites of the cardiac plexus, divers neuroses (such as hysteria, tabes, or different neuralgias), tabagism (manifesting itself principally by arythmia), various digestive troubles (dyspepsia, colic, etc.), and that vaso-motor irritability which constitutes the *reflex neurosis* on which Nothnagel has based his conception of certain forms of angina pectoris.

DR. O. VIERORDT, CO-REFEREE.

In the diagnosis of angina pectoris, we must keep in mind the fact the cardiac anguish, the pre-cardiac pain, and the irradiated neuralgias are the three cardinal symptoms. These are subjective. We know, in fact, no common objective symptom. The state of the circulation, even in cases of organic nature, is variable, and the pulse, while often weak and intermittent, sometimes remains very regular.

As for the pathogeny, it must be conceded we have as yet no certain explanation of the attacks of pain. For sufficient reasons, we do not accept in Germany the theory of Parry and Traube, which refers the pain to a sudden enfeeblement of the left ventricle.

In the treatment of this affection, everybody recognizes the necessity of stimulants in coronary angina, and of narcotics in cases of nervous origin; in the latter forms the employment of morphine or a mixture of chloral and morphine, and of codeine, renders real service. As for angina pectoris of organic origin, this but exceptionally gives the indications for narcotics, and these medicines, when given, should be given with great care.

In angina pectoris due to coronary lesion, the nitrites very much in use in England should be prescribed with much precaution, as they may cause a dangerous fall of blood pressure, and are likely to injure the hæmoglobin. In the nervous forms, the nitrites merit a more general employment than they have yet had in Germany.

In the discussion which followed, Curschmann, of Leipzig, said he had had an opportunity to study a great many cases of angina pectoris coinciding with sclerosis of the coronaries, and he had seen several cases in which these arteries and their branches were entirely sound, or nearly so, but where their points of emergence on the wall of the aorta showed a sclerous alteration, and were found to be narrowed. He has also observed cases of sclerous alteration of the fine ramuscules of the coronaries; in these cases, the attacks of angina pectoris are frequent and severe. As for the pulse, he has always found unusual feebleness, and generally irregularity, during the attacks, and this shows

the need of stimulants, which should always be at hand.

Nothnagel, of Vienna, said he was disposed to attribute the pains of angina pectoris *to a direct vascular origin, i. e.*, to consider it (as in certain forms of migraine) as due to the sensibility of nerves destined especially to the vessels themselves. He spoke strongly in favor of treatment by nitro-glycerin, of which he gives from $\frac{1}{60}$ to $\frac{1}{12}$ of a grain; but to derive full benefit from this medicine, its use should be continued many months.

Von Ziemssen said he had observed a case of angina pectoris due to occlusion of the left coronary artery in which there had been aneurysm and thrombosis. He also believed in nitro-glycerin; has seen striking instances of benefit from this drug in patients who had been long subject to several attacks daily, and had succeeded in warding off these attacks by the use of this remedy.

Schott, of Nanheim, thought physicians should be very chary in the use of morphine in this disease, and they should trust more to nitro-glycerin, which, in his experience, had given results superior to those of any other remedy. He believed also in the efficacy of cauterization-points over the precordial regions; of Swedish gymnastics judiciously indulged in; and of balneotherapy employed methodically.

THE EFFECTS OF LIME ON THE TEETH.

BY W. B. HUBBERT.

Erwin Voit states that in young, still growing dogs, not only the bones but also the other organs suffer from a deficiency of lime salts in the food. The author has investigated the condition of the teeth in growing and young dogs of both large and small varieties, and finds both by microscopical and chemical research, a lack of phosphorus and lime in the teeth of dogs that have been deprived of lime in the food. In a dog that had been kept 162 days on such food, the teeth were in a very imperfect state of development. In another case he kept a dog 28 days on food without lime, it was noticed that the bones and teeth were in an advanced stage of rachitis. One author thus shows that for the growth of the teeth, and during the period of the ossification of the skeleton, the food should contain an abundance of lime salts, and that too in a condition in which it can be readily assimilated.

Correspondence.

HOW DOCTORS LIVE.

How does the profession live in the face of the great competition, the poor collection of accounts peculiar to the profession of America, and in the face of the few or worthless laws regulating the practicing of the healing art? I recognize the difficulty of answering the question, but may throw a little light on the subject. Meagre as the statistics are, they are sufficient to show that medicine, as a business, is not the brilliant success many people may imagine, but, on the contrary, is wholly inadequate to the support of a large share of its members.

I have endeavored to keep track of one hundred of my medical friends after graduation, especially of what they did during the first five years, and find nearly 75 per cent. had to resort to other employments to make a living. Twenty-three received a salary either in addition to practice or separate therefrom. Fifteen were proprietors of drug stores. Three were insurance agents. Four loaned money. One sold real estate. Three were connected with medical journals. One was an agent for drugs. One for books. One preached. One was in the patent medicine business. Two were farmers. One a manufacturer. Two gave massage treatment. One sawed wood, and subsequently suicided. Twelve gave up in disgust, and one never tried practice at all. Twenty-nine graduates only in one hundred exclusively devoted themselves to medicine, and of these eleven associated themselves with other practitioners, and in many cases subsequently fell heir to their practice. In the western part of the country, that is, west of the Mississippi river, 60 per cent. of all physicians are connected with drug stores either as clerks or proprietors. In the East the proportion is much less, being from 12 to 15 per cent. In the West, also, 40 per cent. of them have an interest in farms. All these parties, before embarking in these different lines, tried practice with the results specified above.

I do not claim my figures are absolutely exact, but represent an approximation to the truth, for the very reason that it is difficult to keep track of those who have left

the profession and embarked in other lines. I believe if full returns from these men could be had, they would show a still larger number, than I have indicated, gave up in disgust. Many of them do not seem to care to have their whereabouts known.

These figures mean that of four medical graduates, one only will succeed in getting a living in the profession of his choice. One will fall out, and the other two will be as much interested in other pursuits as they are in the profession. The mere listing of names and addresses of graduates in a medical college catalogue is no indication of the real means by which these men are getting their living. This certainly shows there is a side to the practice of medicine which it is not altogether inviting to contemplate.

The causes of failure are many, but most of these are directly traceable to defects in the laws governing the practice of the profession. When it shall be that the requirements for entering a medical college shall be a liberal education; when the license to practise is vested in a State board whose requirements shall be high; and when better laws are enacted for the collection of medical accounts, then, and then only, will success in the profession be more assured than it now is, and a man be able to embark in medicine as a life-work, without poverty playing the fool with him. In the meantime, many medical graduates must continue to resort to all sorts of outside ventures to gain a living.

W. R. HUBBERT, M.D.

THERAPEUTIC APPLICATION OF STIMULANTS.

All physicians recognize the fact that stimulants play an important rôle in the prevention of disease, in combating it when it already exists, and in convalescence.

A knowledge of the various kinds of stimulants and their proper adjustment to the individual case is not by any means universal.

In considering the therapeutic application of stimulants they may be conveniently divided into seven classes, viz., spinal, nerve, cerebral, cardiac, vascular, hepatic and diuretic.

Spinal stimulants are remedies which increase the functional activity of the spinal cord. Those most employed are strychnine, brucine, and thebaine. These in small and moderate doses, greatly increase reflex excitability, and in large doses cause tetanic convulsions.

The want of an exact knowledge of the pathology of disease of the spinal cord renders the rational use of spinal stimulants difficult. They are employed in cases of general debility without any evidence of distinct disease, and in paralysis where there is no evidence of inflammation, whether it be local, hemiplegic or paraplegic. Among other remedies that may be regarded as spinal stimulants are ammonia, gelsemine, caffeine, nicotine and calabarine.

Nerve stimulants are remedies which increase the nervous activity of the cerebro-spinal system. They may be subdivided into those which act on the cerebrum, or cerebral stimulants; and those which affect the spinal cord, or spinal stimulants, the latter described above.

In popular language stimulants are generally termed, agents which have the power to increase the activity of the brain; or from their producing a feeling of comfort and mirth they are sometimes called exhilarants. A free supply of blood to the brain may be obtained by general excitement of the circulation, more rapid and powerful action of the heart and contraction of the vessels in other parts of the body, driving blood into the brain, or by local dilatation of the cerebral arteries.

One of the most typical stimulants is alcohol, which excites the circulation generally. It is probable that some substances, such as strychnine, increase the mental powers by direct action on the brain tissues themselves, and possibly caffeine may do so.

Cardiac stimulants are substances which rapidly increase the force and frequency of the pulse in conditions of depression. The most important are ammonia, and alcohol in their various forms. Among other stimulants which are sometimes useful may be mentioned spirits of chloroform, spirits of ether, camphor, atropine, digitalis and its alkaloids, strophanthus, convallaria majalis and its alkaloids, convallamarin, adonis vernalis, adonidin, and caffeine.

Vascular stimulants are agents which cause dilatation of the peripheral vessels, and thus render the flow of the blood through them more rapid. These also include alcohol in its various forms, ether, heat and acetate of ammonium. Vascular tonics not only raise the blood pressure, but influence to a considerable extent the quantity of the lymph poured out into the tissues, or absorbed from them, and thus modify tissue change. They are of special importance in the treatment of dropsy.

Among hepatic stimulants may be mentioned dilute nitro-hydrochloric acid, aloes, Rochelle salt, podophyllin, colocynth, colchicine, jalap, rhubarb, leptandrin, euonymin and salts of mercury.

Stimulant diuretics will include the alcoholic preparations, cantharides, turpentine, juniper, uva ursi, buchu, the oleo resins and volatile oils.

It must be acknowledged that among all stimulants the alcoholic preparations are most generally used in medical practice. Too little consideration is given as a rule to sensitiveness of the patients palate in disease. Alcohol would achieve its purposes of stimulation and be better tolerated if administered in the form of the gently stimulating wines, rather than the nauseating combinations that are often given in the form of milk punches and other mixtures. Among the class of wines that are best tolerated are the champagnes and Hungarian wines. Of these latter the Tokayer Ausbruch, imported by Louis Reich, of New York, has been extensively used and commended by many distinguished members of the profession as a palatable, easily assimilable stimulant.

MEDICUS.

Editor MEDICAL AGE:

I notice in a report of the proceedings of the A. M. A., in the Washington Post of May 7th, that Dr. E. L. Shurly is referred to as a Professor in the "Michigan College of Medicine." This is incorrect, as Dr. Shurly is a Professor in the *Detroit* College of Medicine. I also notice the Post refers to Dr. Biggs of Ann Arbor. This should be Dr. Gibbes.

J. W. M.

Detroit, May 9.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The forty-second annual meeting of the American Medical Association is now a matter of history and marks one more step of advancement in the grand march of scientific medical research.

The Association will next meet in Detroit on the first Tuesday in June, 1892.

While we are too modest to dilate upon the many advantages which Detroit offers for meetings of this nature, we cannot refrain from congratulating the Association on its happy choice. Detroit's central location alone should bring out a united meeting of the east and west.

The officers elected were as follows:

President, Dr. H. O. Marcy, of Boston, Mass.; First Vice-President, Dr. Willis P. King, of Missouri; Second Vice-President, Dr. Henry Palmer, of Wisconsin; Third Vice-President, Dr. E. E. B. Davis, of Alabama; Fourth Vice-President, Dr. W. E. Taylor, of California; Treasurer, Dr. Richard J. Dunglison, of Pennsylvania; Secretary, Dr. W. B. Atkinson, of Pennsylvania; Librarian, Dr. Geo. W. Webster, of Illinois; Trustees, Dr. W. W. Dawson, of Ohio, Dr. W. W. Potter, of New York, Dr. J. H. Ranch, of Illinois.

The Association decided that the Journal should remain at Chicago.

Washington, the city *par excellence* for interesting sight-seeing, did not belie its reputation but afforded many opportunities of enjoyment to the visiting members of the Association.

On the whole the Association is to be congratulated on the success of this, the most interesting, scientifically, and most pleasing, socially, of any of its conventions.

REGULATION OF MEDICAL PRACTICE IN MICHIGAN.

Representatives of the various schools of medicine have agreed upon the bill proposed below for the examination and licensing of physicians.

It has not yet been passed by the legislature but has so much to commend it that it deserves the support of all interested in establishing some definite standard of medical knowledge for practice. It provides also for the punishment of those who attempt to practice without giving evidence of their fitness to do so.

The People of the State of Michigan enact, The Governor of this State shall appoint a Board of Examiners, to be known as the State Board of Examiners, consisting of nine members, who shall hold their office for three years after such appointment, and until their successors are appointed.

All persons hereafter commencing the practice of medicine and surgery, in any of its branches in this State, shall apply to said Board for a licence so to do, and such applicant, at the time and place designated by said Board, or at the regular meeting of said Board, shall submit to an examination in the following branches to-wit: Anatomy, physiology, chemistry, histology, materia medica, therapeutics, preventive medicine, practice of medicine, surgery, obstetrics, diseases of women and children, diseases of the nervous system, diseases of the eye and ear, medical jurisprudence, and such other branches as the Board shall deem advisable, and present evidence of possessing a preliminary training sufficient to comprehend the study of medicine, and of having attended three courses of lectures of at least six months each. Said Board shall cause such examination to be both scientific and practical, but of sufficient severity to test the candidate's fitness to practice medicine and surgery. When desired, said examination may be conducted in the presence of the dean of any medical school or the president of any medical society of this State. After examination, said Board shall grant a license to such applicant to practice medicine and surgery in the State of Michigan; which said license can only be granted by the consent of not less than eight members of said Board, and which said license shall be signed by the President and Secretary of said Board and attested by the seal thereof. The fee of such examination shall be the sum of ten dollars, and shall be paid by the applicant to the Treasurer of said Board, to be applied by said Board toward defraying the expense thereof; and such Board may refuse or revoke a license for dishonorable or immoral conduct. In all cases of refusal or revocation the applicant may appeal to appointing power of said Board.

The person so receiving the said license shall file the same, or a certified copy thereof, with the clerk of the circuit court in and for the county where he or she resides, and said clerk of the court shall file said certificate or copy thereof, giving the date of said license and name of the person to whom the same is issued, and the date of such filing, in a book to be kept and provided for that purpose; and said clerk of the court shall each year furnish the Secretary of the Board a list of all certificates on file in his office, and upon notice to him of the change of location or death of a person licensed, or of the revocation of the license granted to such person, said clerk shall enter at the appropriate places in the record so kept by him, a memorandum of said fact; so that the records kept by said clerk of the court shall correspond with the records of said Board as kept by the Secretary thereof. In case a person so licensed shall move into another county of this State, he or she shall procure from the clerk of the court a certified copy of said license, and file the same with the clerk of the circuit court in the county to which he or she shall so remove. Said clerk shall file and enter the same with like effect as if the same was the original license.

Nothing in this act shall prevent or interfere with the performance of their official duties of surgeons and assistant surgeons of the United States Army, Navy or Marine Hospital Service, or to physicians or surgeons in active consultation from other States or Territories. Nor shall it apply to any person rendering gratuitous service in case of emergency.

Any person practicing medicine or surgery within this State without first having obtained the license herein provided for, or contrary to the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not less than fifty nor more than one hundred dollars, or by imprisonment in the county jail not less than ten days, nor more than ninety days, or both fines and imprisonment. Any person shall be regarded as practicing within the meaning of this act who shall append the letters "M.D." or "M.B." to his or her name, or for a fee, prescribe, direct or recommend for the use of any person any drug or medicine, or other agency for the treatment, care or relief of any wound, fracture or bodily injury, infirmity or disease: *Provided, however:* This act shall not apply to dentists. Justices of the peace, and the respective municipal courts shall have jurisdiction over violations of the provisions of this act. It shall be the duty of the respective county attorneys to prosecute violations of this act.

All laws conflicting with this act are hereby repealed. *It is, however, provided:* That all persons registered under said acts shall be taken and considered as licensed under this act. And the Secretary of the board herein provided for, shall enter the names of such persons upon the register so kept by him as licensed physicians and surgeons, without applications or fee upon the part of the persons so licensed.

This act shall take effect and be in force from and after July 1st, 1891.

THE STORAGE AND ELIMINATION OF IRON COMPOUNDS.

While the tonic and hæmatinic properties of iron compounds have been well recognized, the theory of their action has not with certainty been determined. According to physiologists, the amount of iron in the red blood-corpuscles is infinitely small, and it is questioned if the corpuscles can absorb more than has been decided to be the normal amount.

An interesting contribution to this subject has been made by Dr. Carl Jacobi of Strasburg.

Commenting on this paper the London Lancet says editorially:

It has often been a matter of speculation as to the ultimate destiny of the relatively large amount of iron which is ordinarily introduced into the human system as a tonic, and the good effects of which seem almost to be proportioned to the largeness of the dose. It has several times been made the subject of experimental investigation, as, for example, by Hamburger, who regained from the fæces nearly the whole amount of iron salts he had introduced into the stomach of a dog, a very small quantity appearing in the urine. This would appear to show that comparatively little of the metal was really absorbed from the intestine, although it seemed just possible some of it might have been taken up and again eliminated through the same channel. It appears, however, that we must not regard the excess of iron in the urine as an index of the amount absorbed, since even when iron salts are introduced directly into the blood stream very little is excreted through the kidney.

Dr. Jacobi injected subcutaneously a certain quantity of iron salts into veins; and the urine, as it flowed down the ureters, was received directly into a sulphide of ammonium solution. In that way the time of its first appearance in the urine, after the injection, could be accurately noted, as well as the time at which it ceased to appear; and finally, the total amount of iron thus eliminated could be gauged. The general result of such experiments was to show, after due allowance for normal excretion, that only between and 4.5 per cent. of the quantity of iron introduced into the circulation, could be retained from the urine.

The question which Dr. Jacobi now proposed to determine, was the possibility in Hamburger's experiments of much of the iron being absorbed and again excreted through the intestinal wall. He states Du-Cahn had found manganese introduced into the general circulation to be largely excreted through the intestinal vessels, as much as 14 per cent. passing thus within the first hour of the experiment. Dr. Jacobi's results do not show iron is thus eliminated to any large extent, for after its injection into the veins he could regain not more than 1.6 and 2.4 per cent. from the intestinal contents, nor more than 6.35 per cent. and 15.1 per cent. from the intestinal wall (inclusive of that which its tissues normally contain) in the two experiments made for this purpose. It was evident, also, that the elimination through the intestinal blood-vessels took place very slowly, and he did not get any support for the view that the bile carries off much of the metal. The next step, therefore, was to determine what becomes of all the salt which has been introduced into the blood. Is it retained there, or is it deposited and "fixed" in the tissues? The experiments on the urinary excretion showed that no more iron was eliminated after from two to three hours—a fact which might be explained either on the assumption that the kidney ceased to act as an eliminating organ, or else the circulating blood had parted with its excess of this constituent. It was easy to show the latter and not the former explanation was the true one, since a repetition of the injection into the veins caused a reappearance of iron in the urine, its presence therein being again limited to from two to three hours.

The inference that the major quantity of iron taken into the circulation must be deposited in the tissues, was clearly proved by an analysis of the liver and spleen, which organs yielded (especially in the case of the liver) a very large proportion of the metal, even when due allowance was made for the blood which was still retained in their vessels. Hence the general conclusion that not more than ten per cent. of iron salts directly injected into the blood is eliminated by the urine, or the intestinal and biliary secretions; that the main quantity—viz., 50 per cent.—

is deposited within the liver, and the rest in the other organs, such as the spleen, kidney, and intestinal wall—a deposition that must be completed within from two to three hours of the period of introduction of the iron into the circulation. These observations would, therefore, seem to justify the opinion, long since expressed, that the excess of iron found in the liver in cases of pernicious anæmia is (in part at least) derived from previous ferruginous medication. Of course it does not in any way conflict with the further explanation offered for the presence of such an excess of iron in the liver in this disease, viz., that it is due to blood-disintegration. Furthermore, Dr. Jacobi's experiments serve to confirm the fact that the amount of iron absorbed from the intestinal membrane is comparatively small, since Hamburger's recovery from the intestinal contents of the large proportion of the amount introduced into the stomach cannot be explained by elimination through the intestinal secretions. Still, it cannot be said we have as yet any sound explanation of the empirical fact that the tonic or hæmatinic action of the metal is often best exerted when it is administered in quantity far in excess of that which is actually absorbed.

THE PROFESSOR OF THERAPEUTICS AT JEFFERSON MEDICAL COLLEGE.

At a meeting of the Board of Trustees of Jefferson Medical College, held Wednesday, April 22d, 1891, Dr. Hobart Amory Hare was elected Professor of Materia Medica and Therapeutics, the chair made vacant by the retirement of Dr. Roberts Bartholow.

That this appointment is a justly merited and wise one, no one familiar with the record and character of Dr. Hare's literary and scientific achievements will question. His career has been an exceptionally brilliant one. His success is the more remarkable in that his laurels have been won at an age when most medical men are in the chrysalis stage of development.

Dr. Hare was graduated from the Medical Department of the University of Pennsylvania in 1884, and began at once to devote himself to the study of experimental therapeutics. The result of his laboratory researches were distinguished alike by their scientific spirit and their value as exponents of the important study of the physiological action of remedies.

He has for a number of years held the position of Demonstrator of Therapeutics in the University of Pennsylvania, and about a year ago was elected Clinical Professor of Diseases of Children in the same institution.

In addition to his original researches in experimental therapeutics, he has successfully entered the field of medical journalism, being at present Editor of the representative medical weekly of the East, the Philadelphia Medical News. He has also made many valuable contributions to medical literature. Among these may be mentioned the following: A monograph upon "Affections of the Mediastinum," which was awarded the Fothergillian Medal of the Medical Society of London in 1888. In 1889 an essay, written in conjunction with Dr. Edward Martin, entitled "The Functions of the Phrenic Nerve and the Best Methods of Artificial Respiration," was awarded the Warren Triennial Prize of the Massachusetts General Hospital. In 1890 Dr. Hare's works on "Fever: its Pathology and Treatment," and "Epilepsy: its Pathology and Therapeutics," were published. The former received the Boylston Prize, and the latter the award of the Royal Academy of Medicine in Belgium. Dr. Hare has a number of times secured the Fiske Fund Prize of the Rhode Island Medical Society; one of these researches, on the "Treatment of Wounds and Obstruction of the Intestines," having been undertaken in association with Dr. Edward Martin. His latest work comprises a treatise on "Practical Therapeutics," which appeared in the fall of 1890, the popularity of which was attested by the rapid sale of the edition issued.

As Professor of Therapeutics at Jefferson, Dr. Hare will broaden his field of labor, and have opportunity of impressing his own enthusiasm and talent for original investigation on the minds of those who listen to his teachings. The Trustees of the Jefferson Medical College are to be congratulated on this addition to their already strong array of teachers.

RESIGNATION OF DR. J. M. DACOSTA FROM JEFFERSON MEDICAL COLLEGE.

For twenty-seven years Dr. DaCosta has been associated with the Jefferson Medical College, and has done much to contribute to the reputation and success of that institution.

His desire to be relieved from the engrossing duties of medical teaching is a most natural one. It does not indicate, however, his retirement from practice, but his wish for more leisure to devote to his consultation practice, which demands so much time and care.

His reputation as a teacher has attracted many students to Jefferson Medical College, and his retirement from the chair of Practice of Medicine must be deeply regretted by his associates of the Faculty and the many students who have learned their art from his lips.

It will be difficult, indeed, to find a successor who will fitly wear the mantle of this great teacher.

LIEBREICH'S CURE FOR TUBERCULOSIS.

Professor Liebreich's cure for tuberculosis (hypodermatic injections of cantharidinate of potash) seems to be meeting with ups and downs the same as Koch's.

At one of the last meetings of the Berlin Medical Society, Professor Guthmann announced himself as opposed to Liebreich's method, claiming that in three out of seven cases, in which he had administered the remedy, it had produced irritation of the kidneys.

Opposed to this view was that of Dr. Lublinski, who, at the same meeting, stated he had used Liebreich's remedy in twenty-two cases, and thought if there was any action on the kidneys it was simply the result of the disease.

When a discovery in medical science encounters alternate advances and reverses, it is pretty good evidence that it is receiving the careful investigation necessary, while on the other hand an unqualified and enthusiastic acceptance would shortly prove its worst enemy.

Friends of scientific investigation need not be alarmed at reported ups and downs; they are but the oscillations of the pendulum of reason and caution ere it finds its centre of gravity.

Notes and News.

Clinical Art.—

Visitors to the Paris Salon are familiar with a certain phase of Impressionist art, which depicts medical men carrying on their every-day work, and even follows the hand of the surgeon into a variety of practical details ranging from vaccination to ovariotomy. The English school does not lend itself so readily to this unpleasant realism, but every now and then we find a peep taken into the hospital ward or the sick room, and some little idyll of domestic medicine worked out with a quiet pathos, which is apt to call into sudden activity the functions of the lachrymal gland. Many of us remember John Faed's "From Dawn to Sunset," and "Tried Out;" and Fildes's stalwart navy, gazing with speechless misery at his dead child, can hardly be forgotten by those who have seen the impressive work which now finds a somewhat inappropriate resting-place at the Holloway College. This year the brilliant painter of bright scenes returns to his early love, and gives us another touching little domestic drama on the stage of humble real life. A sick child lies on a hastily improvised bed in the middle of a poorly-furnished room, and the doctor, before he disturbs its half-comatose sleep for further examination, takes a long and keen diagnostic glance at the pale face and limp-lying arms. There are obviously difficulties in the case, and he is evidently puzzled, whilst the uncertainty of the situation is reflected by the father, who, standing in the background beside his despairing wife, eyes the arbiter of his child's destiny with an anxious look, and waits patiently for the verdict. The lamp-light throws a ruddy glow over the principal actor in the scene, and through the eastward window we see the chill light of the early morning just beginning to make itself felt.

Under the name of "The Crisis," Mr. Dicksee represents a sick girl sleeping that slumber which may end in the more permanent sleep of death, or lead on to the joyful awakening into convalescence. Worn out by long watching the anxious father fixes his eyes on his daughter's face, and waits for Nature to say the word

which will fill him with joy or sorrow. There is something very fine about the blended look of half-puzzled expectation mixed with a kind of hopeful resignation, which fills the eyes and shades the brow of the impassive father's head, which rests on, and is partly hidden by, the thin hand. And again we begin to try and look into the future. But it is very difficult to say how things are to go in this case. The patient is thin and worn and thoroughly exhausted, but sleep may do much for her, and "the crisis" may be past when she awakes. As the visitor turns away from the canvas he cannot help recalling a well-worn quotation from Hood:

> We thought her dying when she slept
> And sleeping when she died.

—*British Medical Journal.*

Infection Through the Soil.—

The question is often raised whether there is any direct or indirect proof of the infectivity of the bodies of those dying from specific fevers, or whether the soil of graveyards may become really dangerously contaminated thereby; but it is also one to which comparatively little attention has been given by the experimentalist. One aspect of the matter has been lately studied by Dr. Justyn Karlinski, of Konjica, Herzegovina; in a series of experiments (Centralblatt f. Bakteriol., ix, 13) undertaken to determine whether the organs of the body undergo any change in temperature during the natural process of decomposition after burial in the earth, and especially whether any differences in this regard are to be met with in the case of infected subjects. His results show that invariably the putrefactive process is accompanied by a rise of temperature above that of the circumjacent soil; and also that this rise in temperature is markedly higher when the parts examined have been taken from the bodies of men or animals who have succumbed to infective diseases than it is in the case of healthy bodies. He further examined into the question of the survival of the pathogenic bacteria in the affected parts, and states that the typhoid bacilli may retain their vitality in the decomposing spleen for three months, and are only completely annihilated by rapid putrefaction and the presence of a large number of the bacteri of putrefaction. Dr. Karlinski says h had previously shown that typhoid bacill could retain their vitality for a period of fiv months in soil, but that if the earth wer thoroughly saturated with rain water the were destroyed in from seven to fourteer days. The part played by the soil in th origin of epidemics should not, he thinks, b under-estimated, since typhoid bacilli car only exist in water a comparatively shor time.—*Lancet*, April 18th, 1891.

Transmissibility of Influenza.—

In opposition to the theory that influenz is a disease not dependent upon persona contact of individuals for its progression that it is not evolved by the intrinsical operations of a specific poison and propagated through and by means of the ordinary channels of human intercourse, may be mentioned that during the late epidemic observers have found that the course of influenza was independent of, and quite opposed to, the prevailing winds. It travelled slowly in Siberia and Russia, but rapidly as soon as it reached the network of railways in Central and Western Europe. Its course was changed by the mountain ranges of Scandinavia, and it invaded Norway, not from Sweden, but from Holland and England. Again, it was deflected by the Carpathians, turning its course in the channels of travel down the valley of the Danube, and ultimately following, in direction and time, the ocean routes to Africa, India, Australia, and this country. In India it has shown the same peculiarities in following the railway lines as has been observed with us.—*Jour. of Amer. Med. Ass'n.*

The Sale of Narcotic and Anodyne Drugs.—

The evils which result from over-indulgence in narcotics and anodyne medicines have impressed themselves strongly on the minds and imaginations of the people, and the opinion seems to be widespread that one of the chief factors in the perpetration, if not the production, of the vice is the facility with which the drugs can be obtained. At a recent meeting of the Society for the Cure of Inebriety, steps were taken with the view of procuring legislation on the lines of a resolution passed at the meeting. The resolution

recommended that no retail chemist should be allowed to dispense morphine, chloral, or cocaine unless they were prescribed by a medical man, and that no prescription should be repeated without a written order. It is to be hoped the Society will be successful in its efforts to combat a serious and, we fear, a growing evil.

Phonographic Illustration of Disease.—

Dr. Hughlings Jackson and Dr. Rivers showed a phonogram recording the abnormal talking of a patient, the subject of disseminated sclerosis. The phonogram was exhibited by Mr. Cole, of the Edison United Phonograph Company. The patient, whose talking was reproduced, was a man aged twenty-six, who in the course of about five months became affected in an extreme degree with the symptoms of disseminated sclerosis—viz., oscillation of the head, nystagmus, coarse jerking of the arms and legs on voluntary movement, increased knee jerks, and ankle clonus, as well as a typical high-strained jerking and syllabic utterance, which was very well reproduced by the phonograph, the first verse of "Old Mother Hubbard" being rendered by the instrument.—Correspondence London *Lancet.*

Gone to Meet Bergeon.—

Somewhere in the far-off desolate land,
In the storm-swept space, near Hades' darken'd strand,
Two ghosts there met, though lean, lank and wan,
Each on their track to Bergeon's fairy land.

A moment's space they stood and shied;
Then, nearing each other, they looked, leaped and spied.
"Strange, indeed," said one, "that you have died!
Amazed I am that Science thus again has lied!!"

"But who are you?" was asked; "I demand your name, sir! Who?"
"A kin, I vow, so pale and lank and poor.
I'm Brown-Sequard's Elixir, sir. But you are who?"
"I'm 'Kochin,' from Berlin, the tuberculosis cure."

—*American Medical Journal.*

The Laughing Plant

Is the name of a plant growing in Arabia, and is so called by reason of the effect produced upon those who eat its seeds. The plant is of moderate size, with bright yellow flowers and soft, velvety seed-pods, each of which contains two or three seeds resembling black beans. The natives of the district, where the plant grows, dry these seeds and reduce them to powder. A dose of this powder has similar effects to those arising from the inhalation of laughing gas. It causes the most sober person to dance, shout, and laugh with the boisterous excitement of a madman, and to rush about cutting the most ridiculous capers for about an hour. At the expiration of this time exhaustion sets in, and the excited person falls asleep, to awake after several hours with no recollection of his antics.—*Medical Times.*

Summer School of Medicine, University of Virginia.—

Several of the teachers and professors of the Medical Department of the University of Virginia have organized, for the coming summer, a private school of medicine, intended as preparatory instruction for those who propose to begin the study of medicine, and for those who are seeking proficiency, especially in the essential ground-work studies of anatomy, histology, chemistry, and physiology.

A New Application of Electricity.—

One of the latest proposed applications of electricity is a policeman's club that contains a galvanic battery. When the rowdy seizes the club, thinking to wrest it from the policeman, he receives an electric shock which astonishes and paralyzes him, rendering his capture easy.—*Times and Register,*

Dr. James N. Martin

Has been appointed Professor of Obstetrics and Diseases of Women at the University of Michigan. He filled the chair since Professor Dunster's death.

Infection: A Crime.—

A movement has been set on foot in Michigan for the passage of a State law making it a crime to give a person a communicable disease.

Dr. Charles W. Dulles.—

Dr. Dulles, who has since 1887 edited the Philadelphia Medical and Surgical Reporter, bids his readers farewell in the last April issue.

Therapeutic Brevities.

Cocaine in Labor.—Dr. Bousquet, of Marseilles, has published (Arch. de Tocol., December, 1890) a series of cases of labor treated with cocaine. In 1885 Dr. Doléris first noted in public the analgesic action of cocaine on the genital tract. He, as well as Dubois and Jeannel, had good results in cases where the cervix of women in labor was rubbed with a 4 per cent. cocaine ointment. Hartzhorne, in 1887, found that a mixture of 6 parts cocaine, 24 vaselin, and 20 of glycerin acted very well if syringed over the cervix. Dr. Bousquet maintains that cocaine is not thoroughly satisfactory as a local analgesic unless injected hypodermatically. He has therefore adopted the practice of injecting half a Pravaz's syringeful of a 1 in 20 solution of cocaine into each labium majus from 5 to 10 minutes before the spontaneous delivery of the head is expected to occur, or the same time before any artificial intervention to expedite labor. His experience extends to 32 cases. Of these 22 were normal labors and 10 required the forceps, turning, or the basiotribe. The results were most satisfactory, especially in the artificial labors. In some of the cases a plug soaked in the cocaine solution was also placed against the cervix. Dr. Bousquet has little fear of any bad effects from the application of cocaine in labor. The small doses which he employed were not such as have ever proved poisonous in any kind of patient; anæmic subjects, and persons subjected to the influence of cocaine when sitting upright, have suffered from alarming symptoms. The patients in lying-in cases are constantly recumbent.

The Treatment of Infantile Paralysis.—The following is an outline of the treatment of infantile paralysis recommended by Simon: At first, counter-irritation over the spinal column at a point corresponding to the origin of the roots of the nerves affected. For this purpose the least painful agents should be chosen. The functions of the skin should be stimulated at the same time by means of baths of hot water or vapor given in the bed. Chloral, aconite, and conium may be employed to calm nervous excitement. After the first eight days, electricity should form the basis of the treatment. Simon uses a weak Galvanic current, applying the positive pole to the shoulder and arm, the negative pole being placed in a basin of water in which the child's hand rests. The sitting should never last more than eight or ten minutes. At a later stage Faradism may be used, always with the greatest caution. Among drugs, nux vomica is of the greatest service. A drop of the tincture is given twice daily, at the two principal meals. At the end of ten days, or earlier if indicated, the nux vomica should be replaced by arsenate of sodium, a sixty-fifth of a grain at a dose. The use of these two remedies alternately is to be continued throughout the case. Salt and sulphur baths are recommended, but only in the late stages of the disease. Above all, Simon enjoins us never to be discouraged, as the treatment must necessarily be very long.—*La France Médicale.*

Oil of Peppermint in the Treatment of "Grippe."—I have had much greater success in treating "*grippe*" when using full doses of oil of peppermint in addition to quinine, and full doses of bicarbonate of soda, than without it. I give from five to ten drops three times a day, and sometimes more, till the worst symptoms subside. The disease may be assumed as microbic, although the germ has not been discovered. It is probably many times smaller than the typhoid bacillus, and, in consequence, may never be found.

The history of "*grippe*" indicates a germ origin. It resembles, in many characteristics, other well-known germ diseases. I believe oil of peppermint to be a "*grippe*" germicide. It acts with the greatest promptness, and speedily dispels the most alarming symptoms, at least as far as my experience goes. The oil of peppermint is a powerful stimulant to the nervous system, particularly the vaso-motor, promoting regularity and decreased rapidity of the pulse, and relieving local congestion. It is the most diffusive of all the essential oils. These remarks are sufficient as hints to all practitioners who may care to make a trial of the remedy.—Dr. C. L. Hogeboom, in *Medical Record.*

The Mitigation of Drug Intolerance.—The Paris correspondence of the Lancet states Dr. Féré has found some instances in which the intolerance manifested toward certain drugs could be controlled by intestinal antisepsis. Sometimes the failure of the drug to act in an ordinary kindly way, being such an exceptional occurrence, is set down to the fault of the individual, and is attributed to his "idiosyncrasy of intolerance." When this condition obtains, the individual does not at all times evince the same intensity or kind of antipathy. Dr. Féré has gone

further and has made some observations that lead him to assert that, by practicing intestinal antisepsis with naphthol and some other like substances in patients who have formerly been unfavorably affected by even small doses of the bromides, they will cease to be intolerant. Epileptic patients of this kind, for example, will, when naphthol and salicylate of bismuth are given, bear large doses of bromide of potassium without any inconvenience. The eczema and psoriasis sometimes following the use of borax will be prevented if the intestines have been rendered aseptic. Dr. Féré's experiments have been chiefly in the case of epileptics, but he adds that the application of intestinal antiseptics as a check to drug intolerance will not be limited to that class of cases.

Injections of Camphorated Naphthol in Glandular Tuberculosis.—At a meeting of the Paris Société de Chirurgie, on March 25th, a communication from M. Reboul was read on the effect of interstitial injections of camphorated naphthol in tuberculous disease of lymphatic glands (Semaine Médicale, April 1st, 1891). The treatment was adopted in 17 cases in which the glands were in the stage of softening or actually suppurating. In 12 of the cases a cure was effected; in the remainder there was only improvement or the effect was *nil*. The following is the mode of procedure: After clearing out the abscess (if suppuration exists), seven or eight drops of camphorated naphthol are injected, with antiseptic precautions, into the gland. The injection is repeated every other day, and a cure is effected in from one to two or three months. M. Nélaton (who read the paper on behalf of M. Reboul) said he had seen, under the influence of a tampon of naphthol placed in contact with a caseous gland laid bare by ulceration of the skin, that not only the gland itself but the neighboring ones disappeared. Physiological research had shown that the systemic effect of naphthol was prolonged, and that it could be detected in the urine twenty-four hours after the injection.

Massage in Chronic Diarrhœa.—The conclusions arrived at by Mr. Eccles in regard to the treatment of this disease by massage, or kneading, of the abdomen, are the following:

The generation of gas within the stomach and intestines is diminished, and its expulsion effected:

The onward movement of the gastro-intestinal contents is favored:

The rapidity of circulation through the visceral lymph- and blood-vessels, is increased:

The circulation through the liver is improved, and thus the destruction of alkaloids by this organ is promoted. In this connection, perhaps not the least valuable effect produced by abdominal massage is the stimulation to more vigorous action of the diaphraghm and the consequent auto-massage, if one may so describe it, produced by the deeper inspirations and abdominal reflexes excited by the earlier manipulations of the abdominal wall:

The abdominal vascular area is dilated:

The rate of absorption from the intestines is increased:

The intestinal nerves are stimulated.—*The Practitioner.*

Therapeutic Uses of Lime Water.—The United States Dispensatory says: "Lime water is antacid, tonic, and astringent, and is very usefully employed in dyspepsia, with acidity of the stomach, diarrhœa, diabetes, and gravel attended with superabundant secretion of uric acid. Mixed with an equal measure of milk, which completely covers its taste, it is one of the best remedies in our possession for nausea and vomiting dependent on irritability of the stomach. A diet exclusively of lime water and milk is more effectual than almost any other plan of treatment in dyspepsia accompanied by vomiting of food. In this case, one part of the solution to two or three parts of milk is usually sufficient. Externally it is employed as a wash in tinea capitis and scabies; as an application to foul and gangrenous ulcers; as an injection in leucorrhœa and ulceration of the bladder or urethra; and mixed with linseed or olive oil as a liniment in burns and scalds. Having been found to possess the property of dissolving false membrane, it is naturally employed as a local remedy in pseudo-membranous croup."

The Treatment of Chronic Tropical Diarrhœa.—In a paper read before the Medico-Chirurgical Society of Edinburgh, in April, 1890, Dr. Charles Begg stated he had found santonine the most effective remedy for this disease. His plan of treatment is as follows: He places the patient in bed, or at least keeps him on the couch, and commences the treatment, if a flatulent condition indicates it, by a dose of castor-oil guarded with laudanum. Warm water enemata and hot fomentations are also often employed. The diet is principally milk, eggs, beef-tea, dry

toast, or soda crakers, and brandy. The nourishment should be taken frequently in small quantities. Each night a dose of five grains of santonine well mixed in a teaspoonful of olive oil is given, or, if the patient does not suffer much from the effects of the drug, it may be given the first thing in the morning. This is continued for six days, at the end of which time, according to Dr. Begg's experience, a cure has usually been obtained.—*Edinburgh Medical Journal.*

The Identity of Specific and Non-Specific Urethritis.—Henry J. Reynolds, M. D., in the Medical News sums up his paper on the subject as follows:

The germ theory fails to establish a distinction between the so-called specific and non-specific urethritis, and as careful reasoning and analogy seem to show conclusively a mild, non-contagious inflammation may be aggravated and developed into a contagious one, and a contagious one may become so mitigated as to eventually become non-contagious in character, I fail to see, like many other observers, any substantial reason why the subject should be complicated by endeavoring to establish the existence of the two distinct forms of urethritis, where, in reality, only one disease exists. Every case of the disease I would simply term urethritis or gonorrhæa (for reasons as previously suggested), making, however, very cautious use of the term gonorrhœa.

Treatment of Broncho-pneumonia in Children.—Simon recommends the following prescription in the early stages of this condition:

℞ Acetate of ammonium, 7 grains.
Tincture of aconite, 15 drops.
Codeine, 2 grains.
Simple syrup, ½ ounce.
Water enough to make 3 ounces.

A teaspoonful of this may be given every hour until five or six doses are taken. At the beginning of an attack a mustard plaster or other form of counter-irritation should be applied over the thorax, and after it has acted for one or two hours should be followed by an emollient poultice. It is also well to allow steam from boiling water to pass into the air of the sick-room.—*L'Union Medicale.*

Cocaine in Small-pox.—Drs. Luton and Ory recommend highly the internal use of cocaine in the treatment of variola, having tried it during a severe epidemic that raged in Algiers in November, 1889. The good effect of the remedy was shown almost immediately by a lightening of the color of the eruption and disappearance of many of the papules without becoming purulent. Even in those cases in which the papules persisted for some time, there was no suppuration. One of the cases in which the remedy was tried was one of black small-pox, from which the patient recovered. The cocaine was exhibited in a five-per-cent. solution, of which from ten to twenty drops were given every six hours. As no pustules were formed, there was no pitting.—*Medical Record.*

The Douche in Chronic Gout.—Dr. Forester, of Aix les Bains, in a paper on "The Effects of the Douche in Massage Treatment in Cases of Chronic Gout," suggests some considerations of interest both clinical and physiological. It would seem that the combined influence of hot water and massage on the system is to promote the excretion of those organic salts which collect by preference in the joints and prevent that necessary exercise of parts on which health largely depends. It is probable that the healthy functions of the kidney and the skin are of greater importance than we are inclined to realize in the prevention of the class of maladies which find benefit by the treatment at health resorts.

Influenza.—During the present epidemic of influenza I find, as an antipyretic and analgesic, nothing better than phenacetin and salol in combination. With very few exceptions, the temperature has been lowered and pain greatly relieved after the administration of ten grains of phenacetin, or five grains of phenacetin and five of salol, followed by five grains of phenacetin, or two and a half grains each of salol and phenacetin every three hours. I usually give this for twenty-four hours, rarely finding it necessary after that time.—C. Emmerling, in *Medical News.*

Application for Acne Rosacea.—Dr. Unna, of Hamburg, has produced what he believes to be an ideal preparation of ichthyol for application in cases of acne rosacea. It is prepared by combining it with starch in the following manner: Forty parts of starch are moistened with twenty parts of water, and this is well rubbed up with forty parts of ichthyol, and finally one or one and a half parts of a strong solution of albumen intermixed with it. This is applied to the skin at night; it dries in about two minutes, and can be easily washed off in the morning.

The Therapeutic Value of Sodium Iodide.—t has been asserted by many that iodide of odium was an inert substance, or at least iat it exerted no medicinal action similar to iat of iodide of potassium. Dr. Gingeot, of ie Hôpital Saint Antoine, has made a number of experiments to settle this question, and nds the drug does possess undoubted therapeutic properties, equal if not superior to iose of the potassium salt, in cases of arterio-sclerosis, though it may be less potent i cases of syphilitic disease.

Antiseptic Papers.—For application over ounds or bandages, antiseptic paper prepared in the following manner is stated to be f value:

℞ Bichloride of mercury, 2½ drachms.
Pure glycerin, 6 drachms.
Distilled water, which has been boiled and cooled, 1 pint.

Filter-paper is to be impregnated with this olution and applied where needed.—*L'Union Medicale.*

Analgesin in the Treatment of Gonorrhœa.—rindisi employs the following solution as an ntiseptic lotion in the treatment of gonorhœa:

℞ Analgesin, 45 grains:
Sulphate of zinc, 4 grains:
Rose water } ää 2 ounces.
Cherry-laurel water }

Label, "To be used as an injection."

—*Revue Genérale de Clinique et de Therapeutique.*

For Vomiting of Pregnancy and for Acute Gastralgia.—

℞ Cocaine, 0.1
Analgesin, 1.0
Aquæ, 90.0.

M. Sig —A teaspoonful every hour or every alf-hour.

—*Int. Klin. Rund.*

Atropine for Paralysis Agitans.—Moretti as treated three cases of paralysis agitans y hypodermatic injections of atropine. The esults obtained were very encouraging. He ommenced the treatment by the injecon of $\frac{1}{150}$ of a grain, and progressively increased the dose until $\frac{1}{30}$ of a grain was aken each day, divided into two injections.

For Burns.—

℞ Aristoli, 3.0
Ol. olivar, 20.0
Lanolin, q. s. ad., 100.0.

Int. Klin. Rund.

Medical Progress.

Distressing Awakenings.—Some persons do not know what it is to rise from sleep in fresh and buoyant spirits; on the contrary, many awake tired and wearied. A few fare even worse, for they awake in the early morning in great distress, and this feeling is replaced, after a time, by weariness and depression. Between the mental conditions of slight *malaise* and of morning misery all grades of discomfort may be experienced; just as many shades of mental discomfort are associated with the abnormal states that range from slight degrees of neurasthenia up to the more pronounced conditions of hypochondriasis and insanity. Awaking that is not attended by feelings of invigoration and *bien-être*, is abnormal; it betokens some departure from health, or it points to sleeping in unhealthful surroundings. Sleep is a conservative or constructive process. During the activity of daily life the expenditure of nervous energy is rapid, and it preponderates over repair; coincidently, waste products are deposited in the tissues in ratio to the work they effect. The katabolic exceed the anabolic processes, hence the need for sleep. During sleep these conditions are reversed; the expenditure of energy is reduced to a minimum, the waste products are removed from the economy, and, the reparative processes continuing, potential energy is stored up. When depuration and recuperation are complete, awaking ensues, and, the textures being reconstituted and well innervated, the sleeper arises full of power and well-being. A vigorous man awakes full of energy, because his textures have accomplished these processes. If, however, such a man curtails his sleep unduly, or if by excessive fatigue he charges his tissues with a larger quantity of waste products than he can excrete in the ordinary hours of sleep, his bodily textures are not adequately renovated, and he awakens languid and tired. The feeble and convalescent accomplish such changes slowly and with difficulty; they are often unable to effect the necessary processes in the hours usually allotted to sleep, so they awake from their night's repose tired and jaded. They consequently feel keenly any curtailment of sleep, as well as any unusual fatigue, and this they perceive most on awaking. The personal equation plays an important part in the recuperation of sleep. Such tired awakenings are readily intelligible.

The patients to whom I wish to refer, are a class of habitually bad sleepers, who awake every morning more or less wearied and worn out, but who also from time to time, after an

unusually deep sleep, awake in great misery. Collectively, they exhibit very similar symptoms, although these may be modified to some extent by temperament and mental development—in short, by the quality of the man. They awake in the early morning, usually from 4 to 5 o'clock, in much distress, covered with cold perspiration, and they lie tortured by evil forebodings for an indefinite time. The mental distress usually begins before sleep terminates; they are conscious that it awakens them, and occasionally they find themselves groaning. They do not recollect that the sensation had its origin in a terrifying dream, nor do they associate the awakening with dreaming. The acute misery is followed by depression and dread. They attribute the awakenings to sleeping "too deeply," and these bear an intimate relation to morbid sleep. Two patients who are so afflicted state they occasionally awake not knowing who they are, or where they are, and without knowing they have slept until they find out how many hours have passed; the mental unrest follows. They all agree that the seizures, if they may be so called, are more prostrating than lying awake all night. Such awakenings do not recur with regularity, although in one instance they did so every seventh or eighth night for a time. The patients who suffer in this way are invariably neurotic and neurasthenic; some are hypochondriacal. They present widely different symptoms during the day, but they all exhibit, in greater or less degree, a lack of mental power and endurance, and they are introspective, self-conscious, and desponding. They dread the unknown; frequently they are restless and yawn and sigh a good deal. They may be divided into two groups: The first those who have been enervated by excesses, commendable or the reverse; the second by malnutrition, due to an altered blood-supply. One of the chief differences I have noted between them pertains to their falling asleep. The first group become depressed towards bedtime, and positively dread going to bed. There is nothing of this in the second—indeed, before a "bad" sleep there is often a feeling of exaltation (euphoria). From this they are sometimes able to predict the occurrence of such sleep. One patient, who can do so with some certainty, is occasionally deceived, for, in spite of feeling well, too well, and comfortably sleepy, when he goes to bed he grows restless in the act of falling asleep, and, beginning to turn, sleep deserts him. There is a very intimate connection between the causes that give rise to broken sleep and those which induce morbid sleep.

The causes of this morbid sleep: are I believe, twofold: The one depending on some peculiar condition of the nervous system; the other on toxic causes. Morbid sleep occurs in connection with many neurotic diseases. Amongst others may be mentioned hysteria, epilepsy, migraine, and asthma. It has also been noticed in pregnancy and at the menopause. In all these instances it has been observed that such sleep was not followed by any renovation of the bodily powers, consequently it may be concluded that the tissues were unable to effect their depuration or recuperation. In like manner, those who suffer from morning misery, from neurotic causes, awaken wretched instead of invigorated, and sometimes they are afflicted with headache and gastric and biliary derangements. In a lady of advanced age, who was for many years under my care, this morbid sleep was followed by an attack of migraine and a wretched awaking alternately.

Morbid sleep occurs in many toxic conditions; it is common when the blood is surcharged with bile, urea, malarial poison, and it has been noticed to precede an attack of acute gout, and to follow poisoning by the products of digestion (ptomaines?) The morning horror of chronic alcoholism and morphinism is widely recognized. In the case of gout such morbid sleep may be preceded by euphoria, just as that symptom occurs in the initial stages of puerperal and other septic fevers, the exaltation being the first symptom of the poisoning. In the second group of cases under discussion euphoria may precede, and misery follow, the morbid sleep.

The causes which combine to make such awakenings miserable are numerous. The nervous tension that exists in a healthy person during diurnal activity is lessened during sleep. In the weakly and neurasthenic the store of nervous energy is small in quantity and easily dissipated during daily duties; at night its recuperation is slow and difficult, so that the nocturnal condition is one of exhaustion. In such a "hopeful" disease as pulmonary consumption, sinking and distress in the early morning are often complained of. It is about 4 o'clock that the nervous energy is at its lowest, and death frequently takes place about that hour. This lack of vigor is specially felt after morbid sleep.

There are many grades of normal sleep. During sleep the heart beats more slowly and quietly, the brain becomes comparatively anæmic, and vascular tension is diminished. These changes vary with the depth of sleep. Dr. Graves long ago wrote: "It is between three and five in the morning the incli-

ation to sleep is strongest; it is about this me sentinels are most apt to slumber t their posts, and consequently attacks pon camps or cities, made with the inten- on of effecting a surprise, are usually un- ertaken about this period of the morning.")uite recently Mönninghoff and Piesbergen ointed out that the depth of sleep increased or a second time after four hours and a half, nd continued to grow more profound until ne end of five or five and a half hours. The rain is at this time comparatively more loodless. Many kinds of morbid sleep, due o toxic causes, terminate at this hour. It ; during this unusually deep sleep toxic wakening occurs. The man who has drunk r smoked too much is then awakened to re- ent his folly. The more pronounced an- emia that then occurs appears to cause waking. An anæmic brain is the source of acillation and fear. The forebodings that recede an apoplectic attack accrue from nis. The neurasthenic state is equally the arent of dread, and, when these condi- ons are combined, depression and misery re explicable. In enervated states volition ; enfeebled, and emotion is correspondingly xaggerated by day; in the early morning, vith lessened nervous energy and a dimin- shed cerebral blood-supply, these conditions nust be accentuated. For, as Bain writes: States of pleasure are concomitant with an ncrease, and states of pain with an abate- ient, of some or all of the vital energies." t has been truly said that it is in the arly morning the soul holds its inquest in he heart of man. Mosso has pointed out hat in the act of awaking, the brain under- oes a diminution in volume, and contains ess blood than during sleep; this would ap- ear to be coincident with the sudden dilata- ion of the pupils that then takes place. It ; probable this sudden increase of anæmia nay, to some extent, account for the dis- ressing sensations experienced on awaking.

Many neurasthenics grow nervous towards ight, and to such an extent that they may e afraid to go to bed after reading or listen- ng to a terrifying tale. The exhaustion in- eparable from daily activity diminishes the ower of their inhibitory centres. Curtail- ient of sleep sensibly increases this lack of ontrol, and this is equally noticeable after norbid sleep. Awaking in this condition hese centres are unable to resume their unctions, and incapacity to think leads to ntrospection. One patient under observa- ion affirms that occasionally he is able to lirect his thoughts out of their ordinary loomy groove, with the result that depres- ion and dread soon disappear. The absence of sensory stimuli probably increases the distress. The darkness of the night (such awakenings are most complained of in winter) exerts a material influence. It reduces many a neurasthenic to the mental level of a child of a savage. In darkness they are haunted by fears unknown to their daily lives. Travellers in northern climes have insisted upon the depressing effects of the absence of light upon men and the lower animals. My friend Mr. Crockett of Wolverhampton, formerly chief surgeon to the great works at Cyfarthfa, assures me that miners injured in darkness suffer more from shock than those injured in the light. During the light and bustle of the day innumerable impressions are constantly streaming brainwards, and they serve to correct thought. These are almost in abeyance at night. Thought uninhibited from within and uncorrected from without is apt to run riot; moreover, it is liable to run apace, and so to become intensified from the want of distracting agencies around. It has been noted, in the insane, thoughts grow far more extravagant in darkness; indeed, a form of nocturnal insanity is well recognized, characterized by restlessness and excitement, and by an extravagant mental state, symptoms which completely disappear during the day. Some of the patients under discussion have curious hallucinations whenever they shut their eyes. One that seems to be disagreeable is a loss of the sense of locality; they think their bed is placed in a different position, etc. The poet who has well described most things in Nature has not left these awakenings untouched. The following lines occur in Melpomene:

"These pannicks whence? And why my bosom torne
With sudden terrors never felt before?
Darkness inwraps me round,
While from the vast profound
Emerging spectres dreadful shapes assume,
And gleaming on my sight, add horror to the gloom.

* * * * * *

"The fervent prayer was heard: With hideous sound
Her ebon gates of darkness open flew;
A dawning twilight cheers the dread profound,
The train of terror vanishes from view.
More mild enchantments rise;
New scenes salute my eyes."

It only remains to add that men and women suffer from such awakenings in almost equal proportion, and they occur chiefly in persons over forty years of age. Those of the melancholic temperament—designated by Laycock a degenerate temperament—suffer most acutely. In some in-

stances these patients gravitate from neurasthenia into hypochondriasis, and into insanity, hence the necessity of early recognizing the import of the symptom.

Treatment.—It is beyond the scope of this brief note to consider the treatment of such cases at length, entailing, as that would, the hygiene and therapeutics of many diverse conditions. It will suffice to indicate it must be of a twofold description: First, that directed to the condition of the patient, and: Second, that adapted to alleviate the morning misery. The former, which is the essential element, involves the consideration of measures calculated to accomplish restoration of nervous energy, and the excretion of waste products, in which diet and regimen exceed medication in value. The latter, being palliative, is of secondary importance. The indication is, to flush the brain with blood as speedily and thoroughly as possible. This can be done by two methods: By way of the nervous; and of the vascular systems. Mosso demonstrated that a ray of light falling upon the eyelid of a sleeping man caused an increased blood-supply to the brain, by stimulating activity in the nervous centres. This accords with the physiological law which decrees the blood-supply of an organ is in relation to its activity, and it explains to a certain extent the invigorating effects of sunshine. A bright light shortens and decreases the acuteness of the attack. Equally, warm and stimulating drinks, by increasing the frequency and force of the heart's action, afford much relief. The addition of a grain or two of caffeine, and, in certain carefully selected cases, of a spoonful of brandy, is helpful. In some, full doses of valerian, ammonia, and chloric ether, act quickly and well. In all urgent cases, in which the recurrences are frequent and severe, I advise a light to be kept burning all night and an attendant to sleep in the same room.—A. W. Macfarlane, M.D., F. R. C. P., in *Lancet*.

Japanese Massage.—With the exception of some musicians, and a few who may be supported privately by relatives or who are in asylums, the blind of both sexes in this country are engaged in one calling, and have a complete monopoly of that profession. This calling, in the vernacular, is denominated *amma*, and is usually translated "shampooing;" while the operator himself goes by the name *amma san* ("Mr. Shampooer"). This operation, as will be seen later, is in reality a kind of massage treatment, much employed by the natives when they are tired or a little indisposed. It is especially "recommended to tired pedestrians, and to persons suffering from lumbago, rheumatism, and other pains and aches." It is, among the lower classes, a very common remedy for colds and headaches.

In ancient times these blind *masseurs* took the place, to a great extent, of physicians, who, in those days, were not very skillful. In Chamberlain's "Things Japanese," it is stated that "till recently, that is, until about the year 1870, all shampooers in Japan formed one immense guild under two provosts, one of whom lived at Yedo, the other at Kyoto. This guild possessed various legal privileges, and admittance to it took place on the passing of certain tests and the payment of fees. It was divided into several grades, the rise from grade to grade being conditioned by new tests and higher fees. For the highest grade to which any blind mortal could aspire—the grade next under that of provost,—a fee of 1,000 *yen* (dollars) was exacted. This organization is now fast falling into decay."

There are, however, even now many grades of *amma* treatment. In this city (Mito) of 20,000 inhabitants, there are altogether about eighty persons, of whom one-quarter are females, occupied in this calling. Fees also vary, according to the price of rice or the skill of the operator. It is very common to hear in the evening this cry: "*Amma, Kami-shimo, sam-byaker mo*" ("shampooing, upper and lower, three hundred *mo*.") "Upper and lower" means all the body; and "three hundred *mo*" equal three *sen* (cents). We may occasionally hear "*Amma, Kami-shimo, tempo sam mai;*" or even "*ni-hyaker mo.*" A "*tempo*" is a coin worth eight mills, and a "*ni-hyakermo*" means "two hundred *mo*," or two cents. These, however, are the prices of amateurs, operating on children or the very poorest; the average charge of a good operator in this city is five *sen*, and of the very best, ten *sen*. In Tokyo the ordinary cost is ten *sen;* in Yokahama, fifteen *sen*.

A short time ago, the writer was suffering from a severe cold and fever, and felt exceedingly languid. He sent, therefore, for a first class *amma* operator, and asking him, because it was the first time, to be a little tender in his applications, proceeded to be "shampooed."

The shampooer sat in Japanese fashion at the side of the patient, as the latter lay on a *futon* (thick comforter, or quilt) on the floor, and began operations on the arms; then took the back and the back of the neck, afterwards the head (top and forehead), and ended with the legs. On the arms, back,

ack of neck, and legs, he used sometimes he tips of his fingers, sometimes the palms r the back of his hands, sometimes his sts. The movements consisted of pinch- ıg, slapping, stroking, rubbing, knuckling, neading, thumbing, drawing in the hand nd snapping the knuckles.

"The principal procedures" in Japanese ıassage are six in number—"touch passes, riction, kneading, vibration, and percussion." Ve need not, for one moment, suppose that he blind "shampooer" of Japan follows in is movements any such analysis, or even ny specially scientific analysis; but his ope- ations can be classed under one or another f these heads. For instance, we may find im using "touch," or a "simple applica- ion" of the hand, or some part of the hand, ɔ any part of the body; or "passes," con- isting of "light movements made over the urface with some portions of the hand;" or friction," in which "the surface is rubbed arder than in passes" or "kneading," in hich "either one or both hands may be em- loyed;" or "vibration," consisting of "a ew vibratory movements applied to the ody through the hands of the operator;" or percussion," which "consists of blows, vary- ıg in method and force." The so-called joint movements" of Western massage I ave been unable to find in the *amma* treat- ıent; but the above mentioned procedures ıay be identified. It seems justifiable, there- ɔre, to call *amma* "the Japanese massage ystem."—Ernest W. Clement in *Good Health.*

Treatment of Pneumonia with Large Doses of Digitalis.—At the last International Medical Congress, Professor Petresco, f Bucharest, read a paper on this subject. He makes an infusion of sixty grains of owdered digitalis leaves to six ounces of ater, a little syrup of orange being added ɔ sweeten it. A tablespoonful of this mix- ure is given every half hour. In spite of he largeness of the dose, he says he has ever met with a case of poisoning, and naintains that these doses are therapeutic, nd not toxic. The best results are obtained ı fibrinous or croupous pneumonia. The uthor states that if used in the way he de- cribes, digitalis will frequently cut short an ttack of true croupous pneumonia. In from wenty-four to forty-eight hours, after taking he drug, a certain fall of temperature oc- urred, from 104° F. to 98° F.; this being ccompanied by a decrease in the frequency f the pulse and respiration. The digestive ract was little affected. The most marked hanges were noticed in the pulse, which be- came slow, full, and of high tension. The conclusions to which Professor Petresco has come are published in the Therapeutische Monatshefte, Feb., 1891. They are as follows: 1. When given in therapeutic doses, digitalis has a direct anti-phlogistic action: 2. The dose may be raised as high as from 60 to 120 grains of the leaves given as an infusion within twenty-four hours: 3. This treatment may be continued for from two to four days, if the severity of the case requires it: 4. When improvement takes place in the circulation and respiration, this is speedily followed by a disappearance of all local signs and symptoms: 5. The success of this treatment is confirmed by the statistics. In an elaborate table of statistics Professor Petresco shows the superiority of digitalis over the other methods. Thus the highest mortality in pneumonia (34.5 per cent.) occurred when bleeding was practiced, and the lowest (3 per cent.) when tonics, alcohol, etc., were employed. When digitalis, however, was administered the mortality sank as low as 2.06 per cent: 6. From an experience of a very great number of cases, both of his own and other medical men, he maintains the doses, as given above, are perfectly harmless: 7. After a comparison of the various methods of treating pneumonia, Professor Petresco affirms the expectant plan is not only without reasonable foundation, but even dangerous; and his experience has demonstrated that an attack of pneumonia may be aborted if the treatment is commenced at the earliest stages of the disease.—*Lancet*, (London), April 18th, 1891.

The Therapeutic Indications for Aeoro-Therapy.—Dr. S. Solis Cohen, in Dietetic Gazette, states: Inspiration of compressed air is of benefit in dyspnœa of almost any origin; in laryngeal and tracheal stenosis, in chronic bronchitis and bronchopneumonitis, in atelectasis, in bronchorrhœa and fœtid bronchitis, in chronic pleurisy with moderate effusion, in the dry pleurisy of early phthisis, in chronic pneumonitis and pulmonary catarrhs of all varieties, and in all forms of phthisical diseases, except phthisis florida, or except in cases where general softening and large or diffused cavities, give no healthy lung to work with, or indicate danger of severe hæmorrhage. It is particularly in the early and formative stages of phthisis, or in a phthisical subject before tuberculosis has developed, that the best results can be obtained. In simple anæmia, and in chlorosis, the method is of great usefulness, as also in the gouty and rheumatic

diathesis, in dilated heart, in neurasthenia and in nutritive failures generally. It is sometimes useful in asthma and emphysema. It is usefully combined with expiration into compressed air.

Inspiration of rarefied air (most easily applied by means of the resistance valves) may be employed where it is desired to strengthen the muscles of inspiration by increased voluntary effort, as in ill-developed children or adults, in cases of contracted thorax in early phthisis, or as a prophylactic measure in a predisposed subject, and in convalescence after plurisy, pneumonia and typhoid fever. It is usefully combined with expiration into compressed air.

Expiration into rarefied air is of signal advantage in emphysema, in asthma depending on emphysema, in spasmodic asthma, in asthma of chronic bronchitis. It should be combined with inspiration of compressed air, in phthisis, asthma, emphysema, chronic pleurisy, bronchorrhœa, and whenever it is desired to facilitate expectoration, circulatory activity and gaseous exchange.

Expiration into compressed air is recommended in cases of deficient expansion as a means of strengthening the respiratory muscles. In the resistance valves it may be used in combination with inspiration of rarefied air, as a prophylactic against phthisis, and as a measure of pulmonary gymnastics in convalescents from phthisis. It should be combined with inspiration of compressed air when it is desired to relieve congestion, stimulate absorption, or greatly increase vital capacity.

Forced voluntary respiration, and certain calisthenic exercises will accomplish much in suitable cases, and require no apparatus. Where actual disease exists, however, they are far inferior to the measures spoken of, and in debilitated subjects they are useless. These patients are too weak to respire properly unaided, and the facilitation of respiration afforded by the use of apparatus may make all the difference between recovery and non-recovery.

In all cases pneumatic measures must be supplemented by the best possible diet and hygiene generally. Judicious medication will also help. I do not look upon pneumotherapy as an exclusive method. I believe its greatest value in phthisical diseases is in promoting the cellular processes of dissimilation and assimilation. I have already, in this Gazette (Jan., 1888), expatiated upon the necessity of "feeding phthisis," now so well recognized and so clearly taught by all authorities. But unless the phthisical patient be aërated, he cannot be fed, for, as I have once before phrased it, "air is food equally with meat and drink."

TREATMENT OF CANCER OF THE STOMACH.—Journal de Médecine de Paris states that Dujardin-Beaumetz secures gastric antisepsis in cases of cancer of the stomach by the use of salicylate of bismuth, naphthol, or salol, prescribed in the form of capsules made as follows:

℞ Salicylate of bismuth
Calcined magnesium
Bicarbonate of sodium
āā 2½ drachms.

To be made into 30 capsules.

Or,

℞ Salicylate of bismuth
Beta-naphthol
Charcoal
āā 2½ drachms.

To be made into 30 capsules.

Or, again,

℞ Salicylate of bismuth
Salol
Bicarbonate of sodium
āā 2½ drachms.

To be made into 30 capsules.

For the relief of the pain, he uses laudanum, or opium pills, or hypodermatic injections of morphine associated with atropine, as, for example, in the following prescription:

℞ Hydrochlorate of morphine, 1½ grains.
Neutral sulphate of atropine, $\frac{1}{10}$ grain.
Sterilized water, 6 drachms.

Twenty or thirty minims of this may be given at a dose.

The objection to this treatment is that the constant use of morphine may produce the morphine habit, but in the majority of instances the disease progresses so rapidly that this danger is not of any importance. The diet should be absolutely vegetable in its character. The stomach should be allowed to rest as much as possible, and the physician endeavor to use such foods as will be digested by the intestine. This is particularly important in view of the fact that in the majority of the cases of cancer there is a diminution in the digestive activity of the gastric juice. When the cancer is at the pylorus, lavage may be practiced; but if it be at the cardiac end of the stomach, this measure is not to be resorted to. The solution employed in washing out the stomach should consist of naphthol in the proportion of 1 to 1000.—*Medical News.*

The Medical Age.

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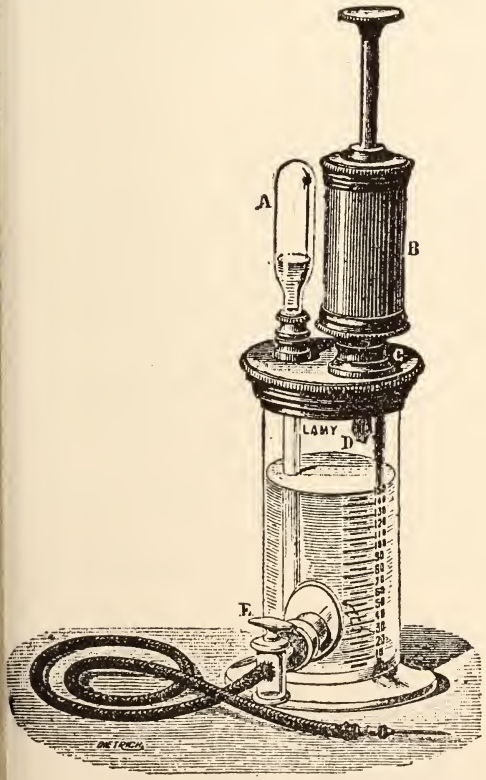
Original Articles.

SUBCUTANEOUS INJECTIONS OF CREASOTED OIL IN PULMONARY PHTHISIS.*

BY DR. P. GUERDER.

The introduction of creasote in the treatment of tuberculosis has outlived a multitude of novelties which during the past few years have been proposed only to be speedily abandoned.



Bouchard and Gimbert first recommended large doses—from 12 to 15 grains—and they lately have given much more than this. Thus, in some cases, Bouchard administered 1 to 1 drachm of creasote *per diem*.

Unfortunately, many stomachs will not bear the mean standard doses of 12 to 15 grains, and it would only be in very exceptional cases that one would be able to administer twenty drops three times a day.

Gimbert, the first to employ the subcutaneous method of administration, invented an apparatus for the purpose, which I have modified. His formula, which I have adopted in my practice, consists of one part of creasote to 14 parts of oil.

Only those vegetable oils are fit to be used that can be emulsified and readily absorbed by the cellular tissue; and almost all exercise an irritant action on the tissues, by the free acids or organic substances which they contain. The least irritant is the oil of sweet almonds, but its price is very high. Common oils can be used by subjecting them to prolonged heat at a temperature of 200° to 250° C., washing with alcohol, and filtering while hot through kaolin; the result is an oil which is perfectly white.

Use only beech-wood creasote, which should be re-distilled between 200° and 210° C., in order to free from phenic acid, whose presence in any considerable quantity might do harm. By this distillation is obtained only guaiacol and creasol.

The injections of creasoted oil give rise to local and general phenomena. The local effects depend on the quantity of liquid, and the rapidity with which the injection is made. If we do not exceed 8 to 10 drachms, and the injection does not allow more than about one-half ounce per hour to pass, neither swelling or redness will occur. If the flow is more rapid, if the injection amounts to from one and one-half to two ounces per hour, there is swelling of the derm, and the distended skin becomes a little hot, but I have never observed any consecutive abscess. Pain comes on but rarely at the beginning of the injection, especially in patients that are very sensitive; it suffices then to arrest the flow for a few seconds, when the pain ceases, as the tissues soon

* Read before the Society of Practical Medicine, Paris, March 19th, 1891.

become tolerant. When the injections are abundant, the sensation of heat experienced may increase with the tension of the tissues and become a little painful, especially if the operation has in any way been hurried; it is generally the next day that patients complain of soreness.

Even while the injection is being made, at the end of 15 to 20 minutes, patients often complain of the smell of creasote in the breath. This odor sometimes lasts till the next day. Total absorption of the injected oil is more or less rapid, and when a series of injections is made in the same locality, this region presents some degree of induration and swelling, though it is but little painful. It is a good plan, then, to practice these injections in another region till these local phenomena have entirely disappeared.

The general effects are much more variable and less marked than the local effects. After moderate doses, no elevation of temperature is observed either during or after the injection. Certain patients experience immediately a slight vertigo which rapidly disappears especially in the open air. Others have a keener appetite; still others complain of the disagreeable odor of creasote in their breath, which may even take away the appetite. Some patients get rid of their shortness of breath for several hours, have a disposition to walk, and feel a renewal of their forces; if they come to the office in a carriage, they want to go home on foot.

In general, the sleep of the night which follows the injection is much better than that of the intermediate days, when the injection is not made every day. Almost all the patients complain the next day of a slight sense of fatigue in the limbs. The night-sweats disappear under the treatment, and the patient increases in weight.

Despite the inocuousness of creasote, as demonstrated by Dr. Burlureax, who in one day has injected almost half an ounce of creasote in the same patient, I advise to begin always with small doses of not more than 15 to 30 minims *per diem*, and to increase gradually by 5 or 10 minims a day till the full dose has been reached. The doses vary much; some patients acknowledge a slight improvement with 30 minims per day; in others it is necessary to give larger doses, though I very seldom exceed 60 minims in the 24 hours. During the first week I practice the injections every day, then every other day, when I reach doses amounting to 30 minims of creasote per day. I have no cases to report at present in detail. Eight months of clinical experimentation with numerous cases, where for two, three, and four months patients seem to be cured, does not yet furnish sufficient positive data for very decisive conclusions in a disease so intractable as pulmonary phthisis. We all, moreover, know the effects of creasote, and have doubtless all regretted not being able to use it in large enough doses. The subcutaneous method removes this difficulty and spares the stomach. I will only remark that creasote does not seem to me to act as an antiseptic agent, *i. e.*, in attacking Koch's bacillus, although in several of my patients bacilli and sputa have disappeared for months. From my own observations, creasote acts as a general tonic; it has, besides, an elective action on the lung, its principle channel of elimination, an action which increases the resistance of that organ. The tonic effect is demonstrated by a general uplifting of the organism; the elective action on the pulmonary tissue has been shown by the rapid cure, in several weeks, of a number of cases of simple chronic bronchitis (not of bacillary origin) which has lasted for years, and resisted climatic and thermal treatment.

What are the indications and contra-indications for this treatment?

I will mention in the first place simple chronic bronchitis, then the bronchial and other adenopaties, with or without caseous *ramollissment*. I have not had occasion to treat osseous or cutaneous tuberculosis. In phthisis, the most favorable cases are those which present a slow and apyretic course, whether with little or much expectoration. All authorities are agreed that creasote is contra-indicated when there is fever. I have seen patients with daily remittent paroxysms, whose fever increased on the days when I made the injections; in other cases, however, I have known the febrile attacks and the sweats to abate, synchronously, with the injections. What is certain is, that the creasote does not always produce favorable effects;

and we must depend on the clinical experience of the future for more precise indications as to the kind of cases likely to be benefited or injured thereby.

The apparatus which I employ is composed of a glass tube of 10 ounces, graduated up to 5 ounces, closed by a cast-iron cover, which is not in contact with the oil, and is pierced by two holes. One of these openings gives passage to a manometer; into the other, which serves for the introduction of the oil, is screwed a force-pump, which is destined to compress the air contained in the upper part of the glass tube. At the lower part of this tube is an opening for a stop-cock of glass, firmly fixed by means of a rubber cork; to this stop-cock is adapted a rubber tube terminating in a hypodermatic needle. In order to work the apparatus (see Cut) pour into the glass tube five ounces of oil, screw on the force-pump and press down the piston till the oil in the manometer rises to the height of the index, which indicates the mean pressure necessary. Open the stop-cock to let flow a certain quantity of oil to clear the tube, and make sure the apparatus works well, and the outflow is sufficiently rapid. This outflow depends not only on the pressure, but also on the calibre and length of the needle, and the resistance of the tissues of the patient. It is not possible to tell in advance what quantity of oil will flow in an hour; this must be found out by trial. I have adopted gold or platinum needles, of middling calibre, $2\frac{1}{2}$ to 3 centimeters long. These needles do not enter as well as steel, are more easily dulled at the point, but do not rust, and are not readily clogged during the operation. There are susceptible patients who only tolerate an injection if made very slowly; in such cases it is necessary to diminish the pressure, perhaps by partly unscrewing the pump till the liquid in the manometer drops to the proper level.

The instrument should be made aseptic before being used. There should not be in contact with the creosote any metal which it can attack, and it is for this reason that I employ a glass stop-cock, aluminium needle-carrier, and needles of gold or platinum, on which the creasote has no action. The air which is injected into the apparatus is first filtered through a layer of cotton in the bottom of the body of the pump.

When the quantity of oil demanded is injected, the stop-cock is closed, and when the tube is empty, the needle is withdrawn and some simple dressing applied over the point of puncture.

Paris, France.

THE PROPER CARE OF THE CHRONIC INSANE.*

BY F. M'CLELLAND, M.D.

I shall make no attempt to treat the subject under consideration from a scientific point of view, but simply present a few commonplace, every-day thoughts, suggested by my observations among the insane of our hospitals.

I prefer the word "chronic" to "incurable," for the reason that it is a very grave question as to how far we are warranted in pronouncing a case incurable. Alienists of wide experience tell us that the most hopeless cases may make good recoveries, while many of the most promising are never fully restored.

For the purposes of this paper I shall not make any special classification other than that of the chronic insane, grouping under this general head persons whose recovery is slow, whose improvement is not promising, or whose ultimate cure is seriously questioned, including epileptics. From this general classification I think there might be a large number selected who could be properly cared for in their homes, persons in such mental and physical condition as to require neither the treatment nor care of the hospital,—tractable and harmless, requiring only a little additional watchfulness and care on the part of relatives and friends. But to do this the conditions must be favorable. In these conditions I would include willingness and financial ability on the part of relatives or friends of patients. Unfortunately for this class of patients, and for the State, both these requisites are often lacking—the former, I fear, more frequently than the latter.

It is a lamentable fact that children in

*Read before the Iowa State Medical Society, April, 1891.

good pecuniary circumstances, made so by the life labors of their parents, send father or mother, or both, to hospitals for the insane, when disturbance of the mind incidental to old age render them unable to work, querulous, fault-finding or exacting, and ever after refuse to have them at home, turning a deaf ear to the most pathetic appeals, and hard hearts to the most cogent reasons for their return. Parents, wives, husbands, relatives, all having an interest in, or who should be the natural protectors of, these unfortunates, are guilty of this unnatural treatment of the chronic insane to a greater or less degree. They are, as a matter of fact, insane, but their insanity is of a mild type; they are harmless; they are simply somewhat troublesome, require additional care and attention; occupying time, perhaps, which the members of the household think can be more profitably employed in work or pleasure. It is simply inconvenient to have them at home; they are in the way, and they are sent to the hospital as a matter of convenience. True, they are technically insane, and are legally committed, but it is not the degree of their insanity which has placed them in the hospital, but the heartlessness of relatives or friends.

There are many such cases in our hospitals to-day, and could you hear the sorrowful tales, the pathetic appeals to be sent home, heard by those who have oversight of them, or read the cold-blooded, heartless letters in reply to requests to children and other relatives to take their friends home and care for them, you would not be surprised that it has become a serious question in the minds of those conversant with these things, how far our laws, regulating the commitment and retention of this class of insane to our hospitals, are responsible for the inhumanity thus perpetrated, and to seriously ask if it is not the duty of our law-makers to enact laws compelling children or other relatives to care for their friends in the condition under consideration, when they are amply able and favorably situated to do so, and to hold them strictly responsible for their proper care, and to make it a criminal offense to neglect or maltreat them.

There are numbers of patients in our hospitals for the insane belonging to this type, who could, and *should*, be cared for at home, if there were any way to compel it. True, they might not be better cared for than they are in our hospitals, but their declining years would be happier for the influence of home surroundings, and the tender care of children and friends. There may be, however, exceptions to this recommendation, prominent among which would be the homes where there are young children. Children are imitative, are likely to absorb the spirit of those with whom they are associated; hence when an adult has lost his or her self-control to a degree as to make them constantly cross and unkind in word, disgusting or offensive in action, profane, or with marked insane delusions, their influence upon children might prove harmful.

In this connection, I would suggest that epileptics should not be permitted to attend our public schools. In the adolescent period, great care should be taken to prevent nervous shock, and especially the shock incident to that produced by children witnessing a sudden epileptic seizure. Permit me to give my own personal experience in illustration of this point. When a boy, I attended school where there was a boy afflicted with epilepsy. He had frequent terrible seizures in the school-room and on the grounds. I became so nervously affected on witnessing them that I was in a constant tremor when he was present; could not study while he was in the school-room. The impressions thus made remain, to a marked degree, to this day. I can visit the wards of our hospitals in which are the most disturbed patients, without a thought of fear or a feeling of nervousness, but when I enter an epileptic ward, that same feeling of fifty years ago, in that school-room, comes over me; I am nervous and uneasy all the time I am in the ward, and if a patient has a fit, it frightens and shocks me more than I would be if assailed by the most violent patient in the institution. This is individual experience in this matter, and I do not think my case is an exception among the pupils of that school at that time, nor that it will prove an exception among scholars who have been, or may be, similarly circumstanced. I believe this subject worthy of the consideration of physicians generally.

In view of the fact that the chronic insane

cannot be cared for at home, except under the most favorable conditions, the important question suggested is: What is necessary for their proper care in institutions specially founded for them? The question is an important one,—so important that I hesitate in approaching it; so inexhaustible that I realize my ability to only hurriedly glance at it in this paper.

It must be remembered, in considering this subject, the chronic insane are not all, nor, indeed, any large portion of them, imbeciles; that they are not, as a rule, persons having no conception of personal comforts; no regard for pleasing surroundings or care for pleasant, reasonable, and sensible conditions; no appreciation of kindly treatment, and no interest in the affairs of life. On the contrary, a large proportion are as particular about surroundings, choice of associates, select as to the individual person, neat, clean, and circumspect in their words and actions, as though their minds were not disturbed. Many of them are from the higher walks in life; refined in taste and sentiment, educated and cultured; while those who are not have the same claims upon humanity, the same rights to full charity in all that pertains to their proper care as those who are; hence we can make no distinctions, no radical differences in our endeavors to give this class the care their helpless condition demands.

One, and indeed a very important consideration in the case of the chronic insane, is to provide means, in the institutions provided for their benefit, for proper classification. This is essential in the care of this class of unfortunates. There should be ample provisions made for the complete separation of the noisy from the quiet, the cleanly from the uncleanly, the orderly from the disorderly, the profane from the religious—in a word, a classification which will permit the grouping of the different types, and thus secure the means of carrying out different methods necessary under different conditions of body and mind; methods which might be applicable under one condition but not under another. This necessarily presupposes ample room, favorably situated, conveniently arranged and appropriately divided; provisions which are sadly lacking in our own State.

In this connection I am of the opinion, that the cottage system has many advantages. Cottages capable of accommodating not less than fifty or more than one hundred patients, I think preferable to those with a greater or less capacity. One advantage of this plan is its cheapness, especially in the matter of attendants. It also affords a better classification, and apparent freedom from restraint, than is secured by the ward plan, especially where the wards in the general or main building are crowded, as they too often are,—a condition which cannot be avoided with the capacity for caring for the insane in Iowa to-day. Most of the chronic cases like the cottage plan. I have rarely heard a patient moved from the wards to the cottages at Independence, complain of the change; on the contrary, they, as a rule, are pleased with it. I cannot better illustrate this than by recalling the words of a patient who had been removed from the wards to the cottage. On inquiring as to how he liked the change he replied—"Oh, I like it better here, I feel more at home; there is more fun among the boys."

There is, however, an occasional exception to this. Such chronic cases have an idea that when patients are moved from the wards to the cottages they are considered incurable, and the change does them harm. I call to mind one case which illustrates this. His was a type of disturbed melancholia; his condition was such it was thought best to move him to the cottage, as his almost constant crying and bemoaning disturbed the patients in the wards to a very great degree. The removal was made, and the first time I saw him afterward he made the following pathetic appeal: "What does this mean? Does it mean that my case is hopeless, that I am incurable, and that I must spend my days in a mad house?" He was returned to the ward, and soon showed evidence of improvement. And here permit me to say, is an excellent illustration of a peculiar condition of mind in many of the chronic insane. They believe they are being cured; they never lose hope of ultimate recovery; they are always getting better; always nearing the time when they will return to their homes and friends, fully recovered. To encourage this hope is an import-

ant factor in caring for the chronic insane; to discourage it, by putting them in a place or surrounding them with conditions which would lead them to think they are incurable, is to at least embitter their lives, if not to do them positive harm, and render their recovery impossible. Hope is the main spring and comfort in all our lives.

Ample room provided, and appropriate arrangements secured for classification, the next important step is to secure attendants adapted to care for the insane. They should possess even tempers, sunny dispositions, a versatility of genius, and a fund of resources for entertaining, amusing, controlling, aiding, and directing, those in their charge. They must have themselves in perfect control; be able to command their tempers under all circumstances; to be firm without harshness, positive without unkindness—in a word, the attendant who is unable to control himself or herself under all circumstances, and who does not fully realize the importance of his or her trust, or fully appreciate the fact that patients are not placed in the asylum for punishment for any cause whatever, and who does not show an interest in the mental, moral and physical welfare of the patients, is not fitted for the right performance of the duties of attendant and the responsibilities accruing thereto.

An important factor in the care of the chronic insane is to teach and aid them in self-control. They should be treated, as far as possible, as sane persons; the attempt should be made to remove, as far as possible, the idea that patients are considered, by those in charge, as insane; to place them in such conditions as will call forth an exercise of their will power, to make them conform to the conditions of sanity. To this end they are furnished rational amusements, given employment such as will call forth an exercise of judgment, or, at least, to so engage their attention as to keep the mind from feeding upon itself. The chronic insane in our hospitals are, as a rule, in much better condition, mentally and physically, during the summer months, when they can exercise and be employed out of doors, than in winter, when compelled to remain inside; hence the question of furnishing constant employment, and the means of daily out-door exercise to this class of insane is an important one; and just how far it is practicable to introduce productive industries into places provided for their care, is worthy of careful consideration. At present productive industries in Iowa institutions are limited to work on the farm and in the garden, which, of course, can only be done in summer; making brooms for the use of the institutions; preparing the rugs and weaving rag carpets for the halls and wards; packing curled hair for mattresses used in the hospitals; together with various domestic services in the wards, kitchens, dining-rooms, bakeries, laundries, etc. This employment is necessarily limited under the present system, and the practicability of increasing and diversifying it by the introduction of such industries as would give constant employment to all the chronic insane who are at all capable of mental and physical labor, is a question of much importance, and, I think, worthy of trial.

In this matter of teaching self-control, wholesome discipline is sometimes necessary. A patient on parole, having the privilege of the grounds, or wider, who takes advantage of his or her liberty and abuses the privileges granted, if deprived of them for a time is not likely to soon again violate the confidence imposed. A patient in a front or convalescent ward who becomes noisy, quarrelsome, or inconsiderate of the rights and comfort of his or her associates, is often reformed, or at least greatly aided in self-control, by being placed in a "back ward" to associate for a time with those who have entirely lost the power of self-control. The closed bed and mild restraint for a limited period, has a most salutary effect often in shortening a paroxysm of excitement. Cases are not rare where patients refuse to eat, but who, at the sight of the stomach-tube being prepared for service, will proceed at once to partake of food.

A serious problem in the care of this class of unfortunates, is that of the propriety of sending home the milder cases, whose whole thought and constant importunity is to get out of the hospital and to their homes. It is a serious question whether patients in this condition are better in or out of the hospital, whether more harm than good is not done by

keeping them under the restraints of the institution. The conditions being favorable, the patients being harmless, with friends to care for them and homes to go to, I believe it advantageous to send them home on a visit; or on trial, even though they may not have improved under the treatment and care of the hospital. This conclusion is arrived at from the fact many patients thus sent away have improved at home; some who have run away from the hospitals have gone home and remained there; some of them seem to have entirely recovered, while others appear so much improved as to be able to support themselves and families. There are also many cases where friends have been persuaded to take patients home, and who did so reluctantly, to find they improved rapidly and never had to return. True, there are many cases where this experiment has failed; where the patients, having made decided improvement in the hospital, grew worse on release, and had to be returned; but the fact that even a few, sent home under seemingly unfavorable conditions, have improved and become self-sustaining, warrants the belief that the experiment is worth trying oftener than it is. And while this is frequently done, it would be done much oftener if there were any pecuniary provisions made therefor. The officers of our hospitals have no fund to defray the expense of sending patients home on a visit or on trial. The patients have no money to meet the expense, and the friends are not able or not willing to pay it. It often occurs that when the Superintendents do assume the responsibility of sending patients home, and it becomes necessary to return them to the hospital, the County officials where the patients have a residence, complain of the expense incurred, and denounce the Superintendents for incurring it. I believe that, in this particular, the proper care of the chronic insane is of sufficient importance to warrant each county in providing a fund sufficient to defray the expense of sending home, on a visit or a trial, cases which, in the opinion of the Superintendents, might possibly be benefited thereby. In many instances where no permanent benefits are derived, it would make the patients more contented on their return to the hospital; indeed some, most urgent to go home, return voluntarily; having been permitted to try the experiment, they realize their condition and prefer hospital life to home life. The difficulty, however, in carrying out these suggestions is, that so few of the chronic insane have homes to go to or friends to care for them. But there are a sufficient number who have, to warrant making the provisions suggested.

But, aside from the experiment of caring for the chronic insane at home, as indicated, under favorable conditions, there is no proper way to do so outside of hospitals designed especially for their care. I would not advocate separate and distinct institutions for the care of this class, under the direction and supervision of county authorities, but that every hospital for the insane be under the supervision of the State, conducted by physicians who make the care and treatment of the insane a specialty, and under the strict surveillance of regularly constituted authorities outside the institutions. There are many advocates of the county plan of caring for the class of insane under consideration; of the erection of hospitals separate from the poor-houses, or in connection with them. But this experiment has been thoroughly tested, notably by New York, and proved such a miserable failure that a return to the State hospital plan was imperatively demanded by the people and acceded to by the Assembly. The State hospital plan seems to be the plan best adapted to securing the best results, in fact the only practicable plan. How these should be constructed and arranged, there is a wide and honest difference of opinion among men who have made this subject a study, Some favor the ward plan; others, the cottage or home system; some, large hospitals; and others, small. Were I asked for my individual opinion, I would say that when the main building has reached a capacity of 500 or 600, enlargement should cease, and that future accommodations should be made on the cottage plan, or new hospitals be erected in some other portions of the State. Classification is an all-important factor in the care and treatment of the insane, and to this end a hospital, with a capacity of 1,000 patients, should not have a population at any time of over 800. Should the demand exceed this, and should

the building become crowded, cottages for the chronic insane should be added, or a new hospital built elsewhere.

But there is another plan for caring for the chronic insane which has its advocates, and which is too often adopted; I refer to caring for them in the county poor-house. And I regret to say this plan has received a seeming sanction in Iowa from the crowded condition of our hospitals, making it absolutely necessary to send many of the chronic insane back to the counties from which they came, in order to make room for more hopeful or unmanageable cases. The poor-house plan is one which cannot and will not receive the endorsement of any humane person who has had experience in caring for the insane, or opportunities for learning their peculiarities, their wants, and their conditions of mind and body. The plan is unwise, impracticable, and in too many instances inhuman. The only thing which can be urged in its favor is its cheapness. But if the charities of a Christian people are to be based upon the cheapest plans for their practice; and if county authorities, men who have no knowledge of or experience with insane persons, or in caring for them, are to be the judges; and if after persons have been in the hospitals for a number of months or years without improvement, they are to pronounce them incurable, and for that reason order them out of the hospital and into the poor-house, or refuse to send them to a hospital on the ground that they are harmless and the supposition that they are incurable—I say, when the caring for the chronic insane comes to this, when their care is a mere question of economy, I would recommend a cheaper plan than that of the poor-house—that of killing them by some more humane method. Do you say this is extravagantly and barbarously put? I reply that I could give you examples of caring for the chronic insane in poor-houses, and the horrible results of this care, which would occupy the full time allotted to this paper; but one or two instances must suffice:

I once saw an old lady, not less than 75 years of age, brought to one of our hospitals for the insane, ragged, filthy and maniacal. She had been subject to the tender mercies of a county poor house for years; confined in a small room, with straw on the floor for a bed. Her attendants were afraid to approach her, and her food was pushed to her through a hole in the partition of her room. When she reached the hospital she was more like a raving wild beast than a human being. She was taken in charge by a female attendant, led to her room, thoroughly bathed, clad in clean clothes, and placed in a clean, comfortable bed. She slept peacefully during the night, and the next morning was quiet and orderly. I saw her, at intervals, for two years after she was brought to the hospital, and she was cleanly in her habits, kindly in her disposition, with no inclination to injure anyone, although badly demented up to the time of her death.

I have seen insane persons brought in irons from poor-houses to the hospitals, who upon being released from restraint, surrounded by homelike influences of the hospitals and controlled by kindness, soon became quiet, and proved to be patients who gave no trouble. I have seen the trunks, and bundles and boxes, containing the belongings of patients sent from poor houses to the hospitals, opened, and found the clothing so filthy, so full of vermin, and so disgustingly offensive; that everything had to be burned.

Now, I do not affirm that all poor house keepers thus care for the insane placed in their charge, but I do know there are enough who do thus care for them to make it the rule. Nor do I say this condition is the result of invariable inhumanity on the part of the hirelings of these institutions; I prefer to believe that, in a majority of instances, they do not know better. They have had no experience in the care of the insane, have had no tact or judgment in their treatment of these unfortunates, and persons without these requirements are, as a rule, afraid of insane people, however slight may be the insanity, and are controlled in their treatment of them by this fear.

Many, too, think when persons are insane it does not matter how they are treated; that they have no appreciation or realization of good or bad treatment; can make no distinction between kindness and cruelty. The result of this is, the patients in their care are neglected; their most ordinary wants are

not fully supplied; and in too many instances they are cruelly punished for insane acts, or kept in restraint continually through fear they might do some one bodily injury.

Another consideration strongly adverse to placing the chronic insane in poor houses is, their manhood is degraded and their finer sensibilities outraged. It must be remembered that the army of insane persons is not largely recruited from the pauper classes, but, on the contrary, from the laboring, frugal, industrious ranks of our population. They are, for the most part, men and women who have been taxing body and mind to secure homes and provide for their families, and whose minds and bodies have been broken down under the continuous strain. Is it, then, right, is it justice, is it humane in the sight of God or man, to pauperize any insane person? Is it not a pure Christianity to advocate and to secure equal justice and equal care to all? Is not the man or woman who has lost God's greatest gift, reason, though they be without a dollar, as much entitled to the best care and treatment the State can give as is the millionaire in the same condition? It is an insult to our boasted humanity, not to say a libel on our accredited Christianity, to make any distinctions, in the care of persons bereft of reason, on account of pecuniary conditions or social relations. It is a burning shame, a living disgrace to the State of Iowa, or any other state, to have a single insane person in a county poor house. The physicians of the State have opportunities for doing valiant service in the cause of humanity, and especially in enlightening the public on the proper care of the chronic insane. The general public is, I fear, wofully ignorant on this subject, and it is the physician's duty to enlighten them upon it. They should use their influence to prevent the chronic insane of their localities being sent to the poor houses; to see that those who are there are humanely treated; to aid in every possible way the increasing of the accommodations in our State institutions for this class of unfortunates; and when this is secured, see that not a single insane person remains in the poor houses of their respective counties. Let there be a united and continuous effort on the part of the physicians of Iowa to hold up the hands of those in charge of our State institutions for the insane, to aid and encourage them in their work, and to influence legislation in behalf of the institutions provided for the care of the insane, the most helpless and deserving wards of the State; to secure all necessary room and accomodations for the proper care of all the insane of the State, be they recent or chronic; and to contribute in every possible way to ameliorate their condition, and to add to their comfort, for doing which the physician has the means and opportunities possessed by no other profession.

And let us all remember that the noblest charity is that which gives help, and that charity bestowed in helping the helpless insane is the noblest of all.

Cedar Rapids, Iowa.

A CASE OF RUPTURED TENDONS.

CHARLES H. MERZ, A.M., M.D.

Of the various injuries to the extremities, no one is perhaps of more interest than the subcutaneous rupture of muscles and tendons. The force exerted to produce such injuries is usually very great, and the prognosis is naturally difficult.

The following case is deemed worthy of record because of its unusual features. Early in March, a boy aged sixteen, presented himself at my office, and requested me to dress his hand which had just been injured. Upon inquiry, I found that the young man had a piece of stout whip cord looped

about his thumb, and in tossing the free end about it became engaged in a rapidly revolving shaft. The boy was lifted from the floor and thrown some distance before the tissues gave way. When first seen, the thumb was found to have been amputated by the cord at the junction of the metacarpal bone and first phalanx, as neatly as though it had been done by a surgeon. The hand

was dressed and treated as a simple lacerated wound. A few hours later, a fellow employé called at my office with the thumb, stating that its peculiar appearance had attracted attention. Upon examination, I found the two extensor tendons had been torn out near their insertion, and remained attached to the thumb, which presented the appearance shown in the illustration; the tendons attached measured a little over six inches, and were torn out at the insertion of the muscles. The arm was kept at rest upon a splint, and continuous cold applied; beyond a slight discoloration and some swelling, no unfavorable symptoms appeared. The wound healed without delay, and at this date the boy has perfect use of the hand and forearm.

While it is not very rare for arms, fingers, or legs, to be torn from their sockets, the favorable course of any such cases is worthy of mention. The treatment of such cases, as exemplified in this particular one, is simple, viz.: Rest of the ruptured part, relaxation of the muscles, and cold applications. The process of repair is the same as in the subcutaneous cutting of tendons. Usually there is some weakness of the part and loss of movement, but in this case recovery was perfect. The case is reported because of its unusual severity, speedy recovery, and absence of any permanent disability.

Sandusky, Ohio.

A REPORT OF TWO CASES OF LARGE SUBLINGUAL DERMOID CYSTS; ONE CASE OF FATTY TUMOR OF PHARYNX AND NASO-PHARYNX.*

BY JAMES A. BACH, M.D.

Dermoid or cutaneous cysts differ from sebaceous cysts in not being originally provided with an excretory duct, and also in the composition of their walls, which contain all the elements of the cutis.

They are always congenital, and are usually seated in the connective tissue around the orbit, root of nose, near the angle of the jaws, in the sacro-coccygeal region, etc. They evidently arise from the imperfect closure of the branchial clefts, and the clefts along the median line. Their contents, as is well known, are commonly composed of sebaceous matter interspersed with short white hairs. In the deeper organs, where they are probably the remains of fœtal inclusions, they may also contain teeth, bone, and rudimentary cartilages.

Of the cases that came under my observation and treatment during the last year, two must be considered of rare occurrence as to locality, being in both cases sublingual and in the median line; branchial cysts of the second cleft. I believe, of the different kinds of tumors reported in the floor of the mouth, this form is the most uncommon.

The first case was of a young lady, Miss P——, of Hartland, Wis., who consulted me in October last on account of great difficulty in speech and deglutition. Other than this she was perfectly healthy and well nourished. On examination I found the tongue crowded well back and upwards into the throat by a large and protruding round mass, situated directly in the median line. By depressing the tongue it could be pressed downwards and would project under the chin. The lady stated that for upwards of ten years she had noticed this tumor forming, and that it had slowly but steadily increased in size. It had never given her any pain or difficulty until recently.

The tumor, on palpation, was evidently of cystic nature, and by means of a small trocar its contents were determined to be of a cheesy substance interspersed with a few small white hairs. The enucleation of the mass was easily accomplished by a large horizontal incision through the mucous and submucous tissues, to the cyst wall, which was of a leathery consistence. By means of the finger and dull-pointed scissors, the separation from the surrounding tissues could be done without rupture of the capsule. After removal it was found to be perfectly globular, and measured two inches in diameter.

The second case, Mrs. B——, from Milwaukee, last December consulted me about an identically similar sublingual growth. This also was removed, and proved to be a dermoid cyst, its contents being composed of cheesy substance and hair. She had noticed the tumor coming on for a number

* Read before the Milwaukee Medical Society, April, 1891.

of years, and only now had the discomfort become so great as to necessitate removal. This cyst measured over two inches in diameter, and was about the size of a small orange—a rather uncomfortable size to be wearing in one's mouth.

A case of perhaps greater rarity than the foregoing, was one of fatty tumor of the pharynx and naso-pharynx.

Mr. Fred. Z., æt. 52 years, consulted me in reference to a large growth in the throat, which made it well nigh impossible to speak or swallow. His general health was good, the only complaint being this growth.

The tumor had been in progress of development for some years; patient thought it a cancer, and avoided physicians generally, fearing his fate might be that of the late Emperor Frederick.

On inspection, a large, round mass was found protruding downwards from the naso-pharynx, touching the epiglottis, and completely filling the pharynx.

Nasal respiration was completely lost, and had been so for over a year. Hearing was not materially interfered with; there was probably some access of air to the Eustachian tubes through the nose. A bent probe could be passed around the butt end of the growth, showing no attachment below. The touch of the finger revealed it, as I first thought, to be of a cystic nature, but when I passed a needle into it, I found a dry puncture had been made. At the point of withdrawal of the needle, one could clearly see the bulging out of fatty tissue. By means of a probe-pointed bistoury, I succeeded in laying open the capsule, which extended away up into the naso-pharynx, and the enucleation of the tumor was accomplished in a few minutes without further difficulty. After the removal of the growth, the remaining capsule showed the attachment to have been in Rosemmüller's groove, back of the right Eustachian tube, extending up, and over an inch, where the capsule was then cut off. The growth measured nearly four inches in length, and one and three-fourths inches in width, having much the size and form of a small kidney. Microscopical sections of the tumor showed it to be a pure lipoma. What were the histological elements that gave rise to the development of a tumor in this locality, is a question I should like to have answered. It certainly is a very uncommon occurrence, and the first I have ever seen.

Milwaukee, Wis.

Correspondence.

TREATMENT OF DIABETES MELLITUS.

EDITOR OF THE MEDICAL AGE:

Dear Sir:—Please give me, in MEDICAL AGE, a few practical hints on cystitis, and also on diabetes mellitus, especially as to the best mode of treatment.

Very truly yours,

H. H. B.

Shamokin Dam, Pa.

It is naturally difficult to convey in a brief letter the best modern treatment of diabetes mellitus. We may say briefly that its treatment is hygienic, dietetic, and medicinal.

Prophylactic measures are important in families in which the hereditary tendency is marked. The selection of the occupations should have reference to the avoidance of prolonged and excessive mental strain, or intense business anxiety. An occupation requiring active outdoor exercise is to be preferred. The necessity for cultivating equanimity of temper should be enforced. Habits of temperance are very important, and late hours and revelling, followed, perhaps, by exposure to cold, should be interdicted.

A taste for nitrogenous, in preference to amylaceous and saccharine food, should be encouraged.

Should there be the slightest trace of syphilis in the individual or the family, a strict watch should be kept for the first manifestation of symptoms, and appropriate treatment applied if they appear.

Accidents involving concussion of the brain should receive special attention, and if such an accident should be followed for a considerable time by a notable slowness of the pulse, suggesting minute basilar hæmorrhages, all mental excitement, as well as exposure to the excessive heat of the sun, should be avoided for at least a year after the injury.

In addition to these means of prevention, a residence at or near the sea-level is more favorable than at a greater altitude, as the denser atmosphere favors the oxydation of the sugar (Demarquay).

If the patient is past middle life, he should have the benefit of knowing that the prognosis at his age is vastly better than when

the disease occurs at an earlier period. It is necessary to meet this with warm clothing.

As to dietetic treatment, if it were a question merely of loss of nutritive material which the excretion of the sugar involves, the dietetic management would require nothing more than that sufficient carbo-hydrates should be taken to provide for the waste in addition to supplying the wants of the system.

It is, therefore, of the first importance to check the formation of sugar. Our object, then, is to furnish a diet which will be sufficient for full nutrition, and yet afford the minimum of starchy and saccharine material.

All forms of meat, except liver, may be allowed; but sauces sweetened with sugar or thickened with flour, must not be served with them. Fish of all kinds, both fresh and salted, or dried, are to be used under like restrictions as to sauces. Eggs are a valuable resource, and in various combinations will serve to make other less palatable articles fairly acceptable.

Among vegetables, such as are known as green vegetables are so far free from starch and sugar that their use may be allowed. These include celery, cabbage, cauliflower, string beans, asparagus, lettuce, dandelion, spinach, mushrooms, radishes, cucumbers, young onions, water-cresses, turnip tops, beet tops, etc.

Acid fruits, such as tart apples, lemons, cranberries, strawberries, gooseberries, plums and cherries, are permissible. They may be stewed with saccharin instead of sugar, or with sodium bicarbonate, which renders them less acid to the taste.

The most difficult article of food for the patient to do without is bread. To make it eatable, therefore, it is necessary to retain a portion of the starch; and in all the so-called gluten or diabetic flours a portion of starch will be found, ranging from 66 to 72 per cent. (Ordinary wheaten flour containing about 90 per cent.) The use of such flour, therefore, simply reduces the amount of starch consumed, and thus far is of value.

A fair substitute for flour is made of wheaten bran. The bran is not wholly innutritious, as it contains about 15 per cent. of nitrogeneous material. This bran flour may be added to gluten flour, to give the lightness necessary in bread making. Eggs thoroughly beaten obtaining the same result.

A very palatable flour is made from almonds, from which the sugar has been removed in the process of blanching. Bread, or rather cakes, made from this are generally well relished for a time, but are too rich to enter largely into the diet for any considerable period.

Fortunately, it is only in severe cases that rigid assistance from the carbo-hydrates becomes necessary, and in still milder cases rye bread may be employed instead of wheat bread. A stale bread, in which the process of fermentation has destroyed a portion of the starch and glucose, is less objectionable than fresh bread.

The question of permitting the use of milk is one which has given rise to much discussion. It seems conclusively proved that sugar of milk is much more readily disposed of by the liver than is glucose. in the early stages of diabetes, at least, it can be given in considerable amounts without increasing the excretion of sugar by the kidneys. Indeed, Dr. Tyson, of Philadelphia, recommends that a diet exclusively of skimmed milk be the main element in the treatment of all recent cases, and claims that by it the sugar production can be arrested in most instances.

As a rule, improvement in the general health coincides with the reduction in the amount of sugar, but this is not always so; and, if under a rigid diet, there is loss of appetite and general falling away of health and strength, with mental depression and nervous disturbance, the diet should be made more liberal, no matter how gratifying the condition of the urine may appear under the stricter regimen.

As to treatment by drugs, while the dietetic treatment holds the first place, there is still room for the employment of drugs. Opium was early resorted to, and in its various forms still holds the foremost rank.

Nearly the whole range of sedatives, including antispasmodics, have been employed with more or less success. Morphine is probably the most efficacious of the list. The dose should be small at first and gradually increased. Of course in this case there is some danger of forming the opium habit

and the effect on the patient must be carefully watched. Codeine was originally suggested by Pavy as a substitute for morphine, and has done good service.

Among other remedies which have been used with so much success are, belladonna, valerian, the bromides, etc.

Still other remedies have been employed, viz., sulpho-carbolate of sodium, ergot, and arsenic in combination with the bromides or lithia.

Jambul seeds is one of the new remedies which has been strongly recommended, and is given in doses of five grains as a powder. Tonics such as quinine muriate, and strychnine, are of great value in the general management of disease.

As to the treatment of cystitis we will reserve our suggestions until another issue.

THE TIME OF CONCEPTION.

MR. EDITOR:—Within the last year, in the AGE, has appeared a number of articles on the time of conception. Now, to me one fact is worth a volume of theory. I have practiced for over thirty years, and it did not take me long to learn the fact that conception seldom, and I doubt if ever, took place after fifteen days from the beginning of the monthly. How often have I heard the remark, "I am safe after ten days," or more generally fifteen days. I never met with a case where it took place within the last week before the flow began.

Now these women knew nothing about the theory of conception, but they knew that after so many days there was no probability of conception.

Every physician ought to know that it takes a number of days for the ovule to pass from the ovum to the uterus. If it should reach the uterus during the flow it would be very apt to pass away with the secretion. The ovule has been found, by Prof. Ford of Michigan University, in the tube, when the patient had died during the period of menstruation, and conception could not have taken place before the flow began.

A. FORD, M. D.

La Grand, Iowa.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE ADMINISTRATION AND THERAPEUTIC APPLICATION OF PEPSIN.

Few therapeutic agents are used with as little discrimination as pepsin. The extreme sensitiveness of the digestive ferments to the influence of other medicaments commonly employed in the treatment of dyspepsia and kindred troubles, is frequently overlooked by the busy physician, and disappointment following its use is often ascribable to this cause.

Pepsin is only active in the presence of free acid, and should therefore be given with a little hydrochloric acid whenever an alkaline condition of the stomach exists.

The normal secretion of acid by the stomach only takes place after food has been ingested, and pepsin should, on this account, be administered after meals, in order to realize a maximum benefit.

It should be remembered also, in prescribing pepsin, as well as other therapeutic agents, that results vary with the patient, and allowance must be made for individual idiosyncrasy and susceptibility. The recognition and proper consideration of this fact will not infrequently account for negative results in therapeutics. Pepsin is no exception to this rule, and should be given in sufficient quantity, and for a period long enough, to accomplish the result it is prescribed for.

Disordered digestion, and what is usually styled dyspepsia, are the most common of human ailments. In the treatment of dyspepsia, it should be borne in mind that drugs have only a secondary place. Hygiene, proper exercise, appropriate diet, and such measures as tend to improve the general health,

should always be considered as valuable adjuvants to the treatment of dyspeptic troubles.

The value of all preparations of pepsin bears a direct ratio to their power to dissolve albuminous foods. The past decade has witnessed a wide extension of the application and use of digestive ferments, and this is due to advancement in the isolation and preparation of these agents.

When pepsin is indicated in the treatment of dyspepsia, it very frequently occurs that too small a dose is given to effect the purpose desired. Dr. R. G. Eccles, who has devoted much time and study to the subject of pepsin, states that the dose even of the best grades of pepsin should be largely increased. He regards fifteen grains to a half drachm as a minimum dose for an adult.

There are certain agents incompatible with pepsin. According to Barbet, sugar does not impair the action of pepsin; and most of the salts are compatible with it. The presence of chloride of sodium diminishes its action, as do all alkalies and alkaline bases, when in any considerable excess, as well as all metallic salts capable of precipitating it from its aqueous solution.

In a recent memoir, Dr. Henri D. Nesslern reviews the current opinions respecting the influence of alcoholic preparations of pepsin. The most advanced opinion, according to Nesslern, is to the effect that good pepsin preserves its digestive power in 20 per cent. alcoholic solution, and that it requires 70 per cent. alcoholic solutions to effect alteration of its digestive properties.

As far as the wines and elixirs of pepsin are concerned, it is not so much by their amount of alcohol that they render pepsin inactive, but probably by the tannin which they contain; and in the fabrication of such preparations, wines which contain little tannin should be chosen.

Without discussing exhaustively the range of application of pepsin, I will briefly state some of the most obvious conditions in which it is of most service:

First may be mentioned its use in all conditions of enfeebled stomach digestion, whether brought about by excesses in diet or by acute or organic disease.

In infantile diarrhœa, due to undigested fermented food in the stomach, pepsin will frequently aid in restoring a normal condition of the digestive tract.

As a means of predigesting food for infants, or in invalids' diet, it is invaluable. It is of great service also in the neurotic who frequently suffer from gastric irritability and consequent imperfect digestion and assimilation.

Pepsin is, moreover, an aid to the absorption of certain medicines, which given alone, disturb the stomach. Such for instance as balsam of copaiba, oil of cubeb, sandal wood and cod-liver oil, forming with them, according to reported experience, emulsions readily assimilable. The English Practitioner calls attention to its use in diabetes mellitus. The advantages claimed for pepsin in diabetes are: It can be given in addition to other remedies, and during observance of dietetic rules: That it permits a relaxation of strict rules of diet before they become injurious: That it frequently relieves any troublesome affection of the skin: In some cases of incoërcible vomiting of pregnancy, when other remedies fail to relieve, pepsin has been tried with success.*

A further local important use of pepsin is as a digestive in the treatment of ulcers. Dr. Milton F. Coe, of Chicago, reports a case of the kind in which the whole tibial surface of the left leg was covered with gangrenous integument, and emitted quantities of green pus.

Wishing to save all the integument possible on this surface, where the soft parts are so shallow, he thought the curette contraindicated and resorted to the use of pepsin, and left the leg in an antiseptic, hygroscopic dressing for twelve hours.

On re-dressing the wound, he found the gangrenous integument considerably digested, and on washing the surface, found healthy granulations springing up where the true skin was not entirely destroyed by the ulcerating process. The character of the ulcer was changed so much that no more pepsin was required. The antiseptic dressings were replaced each day, and the case made an excellent recovery.

In diphtheria, croup, scarlatina accom-

* Dr. T. W. Kohr, in Medical Age.

panied by the formation of false membrane, its locally digestive action is often resorted to with success. The application may be made by spray or by a sponge probang, as may be deemed more expedient. Pepsin appears to be preferable to trypsin or papayotin, because, while just as efficient as a solvent, unlike the latter agents, it does not require an alkaline medium for its action. The secretions of the diseased mouth and throat are acid, and do not require neutralization if pepsin is used. The best results are to be expected from the most active pepsins, the pepsinum purum in concentrated solution giving the greatest promise for good.†

In the chlorosis, anæmia, and neurasthenia of epilepsy, and other neurotic diseases, dyspepsia is often a troublesome symptom, and the condition of such patients can be much ameliorated by an agreeable preparation of pepsin.

In my practice I have long needed a preparation of pepsin which would be therapeutically active, permanent and palatable. Especially had this want been felt in the direction of a preparation in liquid form. I have examined the products of the best manufacturers of digestive ferments for an article of this nature to which I could pin my faith. One of the last tried, was a preparation by Messrs. Parke, Davis & Co., under the name of pepsin cordial. I have tested the merits of this preparation and find in it all that I could wish. It is possessed of all the properties peculiar to pepsin; will dissolve egg albumen or other proteid matter, and curdle milk. It is one-third the strength of saccharated pepsin, and an average dose of the ferment is therefore contained in a comparatively small bulk. A sufficient proportion of aromatics has been added to make it a greatful stimulant to the peptic glands, thus exciting a natural secretion of gastric juice.

Besides its value as a digestive ferment when taken in appropriate doses, pepsin cordial is a most valuable agent as a means for predigesting food. A delicious junket may be prepared by putting a teaspoonful into half a pint of fresh milk, warmed to about 100° F. It should then be allowed to cool and becomes a most satisfactory food for children, especially in cases of infantile diarrhœa or feebleness of the stomach and digestive organs. When milk is inadmissible by reason of the difficulty of digesting it, whey may with advantage be substituted, and this is quickly prepared by making a junket as above described and straining from the curd, the liquid portion, through a coarse cloth. This liquid contains albumen, galacticin, milk sugar, lactic acid and the mineral salts of milk.

For local use, pepsinum purum pulvis, an impalpable powder, will be found of service either alone or in solution, or in ointment.

The following is an eligible formula:

℞ Pepsinum purum pulvis.
Lanolin.
M. Ft. ung.

† Pittsburgh Medical Review, January, 1889.

A PLEA FOR PUBLIC BATHS.

Dr. Simon Baruch contributes to the May Dietetic Gazette a scholarly, earnest, and highly practical resumé of the ancient and modern history and sanitary value of public baths. He points out the inadequacy of the present facilities afforded the poorer classes for bathing, the need of improvement, how to make bathing popular, and the duties of every Government to afford shelter, comfort, and protection to those who require its aid, not the least of which duties is ample provision for free bathing.

He further offers some suggestions as to an inexpensive method for the hygienic utilization of baths.

The essential principles of the baths is the *abolition of the old-fashioned tub*, to which we have been so long wedded that it seems almost a bull to say one may take a bath in the house without a tub. But the difficulty of keeping this implement clean is the most invincible barrier to the public bath, in which facilities must be offered to large numbers in rapid succession. The large quantity of water must always be another obstacle. These objections are at once overcome by adopting the *rain bath*, known to us as the shower bath, as a substitute for the tub bath. The bather simply soaps himself, and standing in a rain of warm water, falling with some force, scrubs and cleans himself perfectly in a short time. He has the me-

chanical effect of the falling stream to aid him, and does not, as in the tub, continue to bathe in soiled water.

The advantages of the rain bath are:

The outlay for tubs is avoided as well as the cost of their wear and tear. This is an enormous expense, if durable tubs are wanted, as many of us who have been connected with hospital building committees are aware:

The avoidance of filling a tub before emptying and scrubbing it after each bath must economize much labor, time, and expense. As the rain bath is automatic, it requires no attendance at all to prepare it. Supervision only is necessary. It is so simple that it is easily kept in repair, the water supply coming from an apparatus not in reach of clumsy or careless people:

The time required for the rain bath is much less than for the tub bath, because the mechanical effect of the descending stream aids the removal of accumulated matter, and because no soiledwater touches the body:

The cleansing is more thorough for the same reason:

The space needed for a rain bath is about one-half of that required by a tub bath:

The economy of water is enormous. The tub bath requires, according to Lassar's calculation, 20 litres of water, while for the rain bath 10 litres are ample:

The danger of communicating disease is placed beyond possibility. Even if the attendants or bathers are careless, the rain bath keeps itself clean automatically. Not a particle of impure or contagious matter can be left in the bath-room proper:

The refreshing effect of the rain bath is valuable. While the tub bath is relaxing, the rain bath stimulates the skin and thus provides protection against subsequent exposure. If its temperature is lowered at its termination, the tonic effect of such a bath would be of immense value.

Their exterior must be so modest that they do not repel the poor and lowly by architectural pretensions.

They should be neat, clean and inviting, with an ample supply of warmth, ventilation and light.

They should be constructed of economical but substantial material, and managed in an economical but not penurious manner, so that a cleansing bath may be obtained without trouble or expense (or at a very trifling outlay) and without sacrifice of much time, which to the laboring man is money.

They should be open every day and night, so long as people are abroad in the streets.

Several conditions are essential, and should never be lost sight of in the construction of all public baths.

They must be located in the very midst of the most populous districts, where the poor and laboring classes reside.

CYCLING AS A THERAPEUTIC AGENT.

Dr. Oscar Jennings, of Paris, in a recently published pamphlet makes a strong plea for the bicycle as a means of relieving the ills that sedentary flesh is heir to.

He has brought together from the writings of other medical authors, and from the pages of newspapers and magazines devoted to cycling topics, a considerable mass of evidence. Dr. Jennings is an enthusiast, and claims not only that cycling is free from objection, but that it is curative of some disorders, and in itself a regular form of exercise. Dr. Jennings' book confirms the impression, formed from observation and the perusal of scattered notices in fugitive literature, that cycling is a form of exercise especially useful to men who are growing to be a little more than middle age. A man who has followed a sedentary occupation begins to experience increased disinclination to exertion, chronic constipation with some stiffness, and, it may be, pains in the joints. For such a man a bicycle is capable of accomplishing a great deal. Under its influence exercise ceases to be a burden, the bowels become more regular, and the joint trouble, which may be at first a little aggravating, ultimately disappears.

Dr. Jennings believes that chronic gout and rheumatic gout may thus be cured, or at least kept at bay, even when the patient has been crippled by severe attacks. He also speaks very confidently as to the cure of obesity, if the patient will refrain from gratifying the taste, which is at first very trying.

He even finds a reason to believe that this favorite exercise may be a useful adjuvant in the treatment of early consumption.

Book Notices.

THE COSMOPOLITAN FOR JUNE, WITH 120 ILLUSTRATIONS.

The personal element enters largely into its composition, and an impression of beautiful women is the first received by the reader who turns its pages. The frontispiece is a portrait of Madame de Pompadour, and pertains to a bright sketch of a summer spent in the home of that famous woman by Amelié Rives and her guests. Miss Julia Magruder, the writer, was one of those guests, and instantaneous photographs are used to illustrate the scenes of a delightful holiday amongst unusual surroundings. A pleasant insight into the attractiveness of Japanese women is given in a paper by Henry T. Finck, illustrated by a large number of photographs of pretty faces. The art article of the month describes the work of Gustave Doré, with elaborate engravings which illustrate very well the masterpieces of that wonderful artist. Thomas B. Connery, formerly managing editor of the New York Herald, gives interesting reminiscences of the first work of Stanley for that journal, and of his neighbor, Thomas A. Edison. S. G. W. Benjamin, ex-Minister to Persia, tells the true story of Noor Mahal, the Light of the Harem, celebrated by Thomas Moore in Lallah Rookh; this bit of Eastern biography is illustrated from Oriental sources. Three continents furnish material for the June number. The European contributions consist of a description of a Model Municipality, an article well worth the attention of Americans interested in municipal government; the Woolwich Arsenal, which Mr. Pelham-Clinton, through influential relatives, was permitted to have photographed expressly for the Cosmopolitan; and a charming sketch of Beau Brummell and his times. Hjalmer Hjorth Boyesen's story is illustrated by Wenzell, whose work on Life has made him so well known the country over. The half-million people who write for periodicals will find matter of great interest in an article by Mr. Frank Howard Howe, for some time one of the editors of a New York monthly. Mr. Howe gives his personal experiences of the manuscripts of the "Great Unpublished," and offers much advice that will be found useful. Perhaps the most valuable article of the number is that contributed by Mr. Abner L. Frazer to the literature of the farmers' movement. The Cosmopolitan prize of $200 for the best article on "the needs of the farmer, his hours of labor, and the National legislation necessary to his prosperity," was awarded by the judges to this gentleman. The article itself is brightened by a series of cartoons by the famous artists, Attwood of Boston and Dan Beard of New York.

FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS. By Wm. Acton, M. R. C. S. Cloth; 8vo.; pp. 260. Price, $2.50. Published by P. Blackiston, Son & Co., Philadelphia.

Some idea of the popularity of this work is had by the fact it is now in its seventh edition. Mr. Acton has done good service, not alone to the medical profession, but to the laity as well, by grappling in a most practical and comprehensive way with sexual vices and derangements. The Lancet (London) remarked recently regarding this class of diseases: "The only way in which the most important functional ailments and aberrant physiological states affecting humanity can be rescued from the grasp of the most disgusting and villainous quackery, and treated with benefit to patients, is by the scientific and conscientious practitioner openly taking them under his charge."

In securing such measures, then, the volume before us is an important aid and factor. It is especially valuable in that it may be placed in the hands of the most sensitive of the laity without fear of offending; or given to the adolescent youth with the certainty of benefiting instead of corrupting or in any way exciting a prurient imagination. Regarding Impotence, Sterility, Spermatorrhœa, etc., the bugbears of the ignorant, and sources of inexhaustible revenue to unscrupulous and charlatan practitioners, the work discourses in simple language, and with plain practical common sense exposes popular errors, and the tricks of medical wolves who masquerade in sheep's clothing. We wish every young man and woman between the ages of fifteen and twenty-five might peruse this book, and doubt not many of their elders would be materially benefited thereby.

SURGERY, A PRACTICAL TREATISE WITH SPECIAL REFERENCE TO TREATMENT. By C. W. Mansell Moullin, M. A., M. D., Oxon. Assisted by various writers on Special Subjects. With five hundred illustrations, two hundred of which have been prepared expressly for this work from special drawings. Published by P. Blakiston Son & Co., Philadelphia. Pages 1180.

Part I, of this highly practical work on surgery is devoted to "The General Pathology of Surgical Diseases; Part II, considers "Injuries;" Part III, "The Diseases and Injuries of Special Strictures" are very fully treated.

Controversial or moot questions are not discussed, the purpose of the book is to give practitioners a helpful record of the best modern methods of surgical treatment divested as far as possible of theoretical speculation.

That this purpose has been fully achieved is evident from perusing any of the chapters devoted to the minutiæ of the practical management of conditions requiring surgical aid. The writer was particularly impressed with this in reading the very able consideration of the various forms of hernia. Nothing is left unsaid to give the practitioner a clear conception of every detail of the paliative and radical treatment of hernia.

The publishers are to be congratulated on presenting to the profession so excellent a work, and one so fully meeting modern requirements.

THE POCKET MATERIA MEDICA AND THERAPEUTICS. By C. Henri Leonard, A. M., M. D. Cloth, 12 mo., 300 pages; price, $1.00. The Illustrated Medical Journal Company, Publishers, Detroit.

This volume, so the preface informs us, has been in preparation for the past four years. The drugs of as late introduction as 1891 are to be found in its pages. The author claims to have incorporated everything of merit, whether official or non-official, that could be found either in standard works, or from many manufacturer's catalogues. The scheme embraces the pronunciation, official or non-official indication, gentitive case-ending, common name, and dose; then the synonyms, English, French and German. If a plant, the part used, habitat, natural order, and description of plant and flowers, with its alkaloids if any. If a mineral, its chemical symbol, atomic weight, looks, taste, how found, and its peculiarities. Then the action and uses of the drug, its antagonists, incompatibles, synergists and antidotes. Then follow its official and non-official preparations, with their minimum and maximum doses, based, so far as possible, upon the last U. S. Dispensatory. Altogether, it is a handy volume for either the physician, student, or druggist, and will be frequently appealed to if in one's possession.

SCRIBNER'S MAGAZINE FOR MAY.

The contents for May are :

"Broadway — the Twenty-third Street Crossing." Frontispiece; drawn by A. B. Frost, engraved by T. H. Heard.

"An Ocean Steamship—The Ship's Company." By J. D. Jerrold Kelley, Lieutenant U. S. Navy. [The second article of the series upon Ocean Steamships.] Illustrations by O. H. Bacher, Charles Broughton, R. F. Zogbaum, Frederic Villiers, Herbert Denman, F. C. Schell, and W. L. Metcalf; engraving by C. I. Butler, Frank French, Robt Varley, F. A. Pettit, T. Schussler, and G. Del'Orme.

"An Alabama Courtship." Part first. By F. J. Stimson. (To be concluded in June.)

"From the Hungarian." By Duncan Campbell Scott.

"A Spectre of Folly." By Octave Thanet.

"The Transfer of the Temples of Ise." By E. H. House. Illustrations by W. A. Coffin, and Japanese artists; engraving by Gustav Kruell and I. M. Van Ness.

"As to Spring." By Edward S. Martin.

"Jerry." Part third; chapters XV–XVI. (Begun in June, 1890; concluded.)

"Broadway." By Richard Harding Davis. [The first article of the series on the Great Streets of the World.] The illustrations by A. B. Frost; engraving by W. H. Peckwell, E. H. Del'Orme, and W. B. Witte.

"A Fragment of a Play." With a chorus. By Mary Tappan Wright.

"Shakespeare as an Actor." By Alexander Cargill. With many reproductions of old prints, portraits, etc., from the collection of Henry Irving, Esq., by permission, and from other sources.

"To the Dewy Wind-flower." By Louise Imogen Guiney. With a decoration.

"Dream-Poetry." By Bessie A. Fichlen.

"A Toledo Blade." By T. R. Sullivan.

"The Point of View"—Impressionism—Thackeray and the Biographer—"Truth"—Patagonia Irredenta.

TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M.D., Professor of Medical Jurisprudence and Toxicology, University of Pennsylvania. Third Edition. Revised and Enlarged. Published by P. Blakiston Son & Co., Philadelphia. Pages 666. Price, Cloth, $3.00; Leather, $3.50.

This, the third edition of this work, has been carefully edited to bring it up to the present day, and much new material added with the same object in view.

The question of medical jurisprudence is one that doctors and lawyers must fully post themselves on, as they are liable at any time to be called upon as experts or counsel, and with the tendency to badger the physician, when called upon to testify, and the variance in opinion of different experts, none should be without the knowledge afforded by this work. The broader a man's mind the more valuable his opinion, and as a matter of fact, cases are not infrequent when doctors, misrepresented by their patients, are mulcted for heavy damages, when a better knowledge of the laws governing the relation of physician to patient, and lawyer to client, might have spared them this humiliation and expense.

PRACTICAL TREATISE ON ELECTRICITY IN GYNÆCOLOGY.—By Egbert H. Grandin, M.D. Illustrated. Octavo, 180 pages. Muslin, $2.00. New York: William Wood & Co.

The aim of the author has been to present, as far as possible, an unbiassed estimate of the value of electricity in the treatment of diseases peculiar to women. The agent is considered not from the standpoint of a specific, but as a valuable adjuvant to routine therapeutic methods. Whatever positive assertion may be found in the work, is the outcome of ample and prolonged study and experience. The hope is expressed that one result of the labor expended may be the more general resort to an agent too long neglected and yet of inestimable value.

Notes and News.

A Typhoid Fever Specific.—

The Sydney correspondent of the London Lancet reports the following facts concerning an alleged specific for typhoid fever: It appears that when operating last year on a case of suppurating hydatids in which the pus had a most offensive odor, Dr. O'Hara, of Melbourne, by some mischance opened the chyle duct. Immediately the chyle came in contact with the pus, the stench ceased as if by magic. Dr. O'Hara was so much struck by this that he handed a bottle of the chyle to a bacteriologist, who made many experiments with a "fungus not unlike common yeast," which he cultivated from the chyle. He found the cerevisia to be a powerful deodorant and germicide. It was fatal to the cultivations of typhoid and diphtheritic bacilli to which it was added, and had cured a case of typhoid fever when given as a last-chance medicine. On these qualities of chyle becoming known to Dr. O'Hara, he used the "fungus" which the bacteriologist had sent him, and according to his own statement, with great success. Several patients who were *in extremis* from typhoid fever rapidly recovered, and diphtheritic throats on which the remedy had been sprayed quickly got well. Then Dr. O'Hara, who is a leader in the profession, and a surgeon to the Alfred Hospital, induced some of his colleagues to try the "specific." They did so, but the trials were carried out in so unsatisfactory a manner that for an accurate estimation of the value of the remedy they were quite useless.

The Effects of Certain Drugs on the Renal Circulation.—

Dr. Albanese, has published in an Italian journal, some important researches on the effects of caffeine, chloral, and curare, on the circulation in the kidney, by which he has been led to the conclusion that the amount of urine secreted is not directly proportional to the quantity of blood passing through the organ. When chloral alone was given, there was a very marked increase in the volume of the kidney, though, as is well known, this drug has an exceedingly slight diuretic action; while curare, which has a marked diur-

etic action, was shown to cause no perceptible increase in the volume. When caffeine was introduced into an animal already under the influence of either chloral or curare, it immediately caused a decided increase in the size of the kidney, and at the same time induced marked diuresis. Nevertheless, the increase in size produced under these conditions was not enough to account for the large quantity of urine secreted. Dr. Albanese does not agree with Schroeder that caffeine contracts the renal vessels, but finds that its action is first to increase slightly the volume of the organ, and then to cause a slight dilatation of the vessels. As there appears to be no indication that the diuretic action of drugs is due to increase in circulation or in volume, he is inclined to refer it to some change effected in the renal epithelium. —*Lancet.*

A Happy Termination of a Suit Against a Doctor.—

The Hospital Gazette reports the following, the moral of which is obvious: A servant girl sought a doctor's aid for, as she alleged, functional irregularity, which, however, he soon satisfied himself was due to pregnancy. She stoutly denied the accuracy of his diagnosis, and was very indignant at the suggestion. Later, the girl's mistress waited upon the Doctor, and was advised by him to dismiss her from her service unless she wished an addition to the family circle. The girl was dismissed accordingly, stoutly, however, declaring the innocent character of her condition. She then went to another doctor, who kept a dispensary in the neighborhood, who gave her a certificate to the effect that she had none of the signs of pregnancy as far as he could discover. A solicitor was consulted, who advised an action for slander, and lost no time in taking the necessary proceedings. Of course the doctor had to prepare his defence, and for months he was worried by legal processes. Just before the trial was fixed for hearing, he was much relieved in the morning to receive a communication to the effect that the action would be abandoned. The young person had become a mother, and the solicitor thought it would scarcely pay to put his client and her baby in the witness-box.

The Germicidal Power of the Blood.—

The blood is known to have germicidal properties, and these properties have recently been studied by Von Fodor, who reaches some interesting conclusions. He finds that increased alkalescence of the blood raises its germicidal power very much. The drugs which do this most effectively are the carbonates of sodium and of potassium. By the alkalinization of the blood of rabbits he made a large per cent. of them refractory to anthrax. Hydrochloric acid had no effect on the germ-destroying power of the blood, while quinine actually lessened it.

These observations are of interest in connection with the observations of Bordas, who asserts that he has discovered the specific microbe of acute rheumatism, it being, he thinks, an organism allied to the micrococcus pyogenes.

On the other hand, the statement that quinine lessens the germicidal power of the blood is absolutely untrue, as regards the plasmodium of Laveran at least. We are accustomed to think also that hydrochloric acid is a good drug to take in order to prevent the infection of cholera and other germs which get in by way of the stomach. Von Fodor's observations, therefore, cannot have a general application.

He states that temperatures up to 39° C. or 40° C. also increase the fighting power of the blood against pathogenic organisms.—*Medical Record.*

Why the Stomach Does Not Digest Itself.

From a new study of this subject Dr. Sherwald announces the following conclusions: 1. The balance between the alkali of the blood and the acid of the gastric juice does not follow, during life, the law of diffusion, but moves in narrower limits: 2. The self-digestion of the stomach is partly prevented by the alkalinity of the blood, and partly by cell-action: 3. The living epithelium interposed between the blood and gastric juice prevents their mutual neutralization and preserves the alkalinity of the blood and the acidy of the gastric juice: 4. By this protection the stomach is spared a great deal of work of secretion and absorption: 5. The protection furnished by the flowing blood is partly due to its alkalinity and partly to its

properties as a nutritive liquid: 6. All influences which arrest the nutrition of the cells of the walls of the stomach, may lead to self-digestion and ulceration. The conditions which may be mentioned in this connection are: First, disturbances in the circulation: Second, direct injury to the epithelium, and: Third, injuries of the trophic nerves.—*Münchener Medizinische Wochenschrift.*

Notes of the American Medical Association.—

While the Journal of the Association will remain at Chicago, there is still a question as to whether the existing management will be retained. A special meeting is to be held at Chicago to decide this.

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Among the editors who have been prominently mentioned for the editorship, in case it be changed, are Dr. Frank Woodbury, of Philadelphia, Dr. J. C. Culbertson, of Cincinnati, and H. C. Moyer, of Chicago.

Dr. Woodbury presided at the meeting of the American Medical Editors, in the absence of the President, Dr. F. L. Senn, and was elected President for the ensuing year.

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Dr. Henry O. Marcy, A.M., M.D., L.L.D., of Boston, is a most fitting choice for President. He is a representative of the most cultured, progressive, and ethical, element of the profession, and will fulfil the duties of the office with grace and dignity.

Physicians and Life Insurance.—

In November, 1888, Dr. George Bernays, of St. Louis, cut his finger while performing a surgical operation. Erysipelas set in, and he died within thirty days. Mrs. Bernays demanded of the United States Mutual Accident Association the sum for which the doctor was insured, claiming that his death was the result of accident. The Company admit the cutting, but deny that he was seized with erysipelas then, claiming that he had had the disease nearly all his life. They claim further, that as "there was no visible mark on his hand at the time of his death," there is no liability upon them to pay the insurance by reason of a stipulation in the contract or policy. The rulings of the court, and the final decree in this case, will be of interest to physicians throughout the country, and will have a material effect upon the readiness of physicians to take accident insurance policies.—*Medical News.*

Death from Inhalation of Gases Generated by a Gasolin Stove.—

N. K. McCormick, M. D., reports, in the Medical News, two cases of suffocation resulting from the use of gasolin stoves. He reaches the conclusion from his study of the subject, that the practice of heating water in bath-rooms should be condemned, for the reason that extra-large burners are used, consuming the oxygen very rapidly, while the rooms are almost invariably small and poorly ventilated. There is, also, the danger that the victim might fall face-down in the tub, in which position a few inches of water would suffice to drown him. The general use of gasolin stoves in hot weather, for heating water for bathing and for cooking purposes, makes these cases and Dr. McCormick's observations of interest to physicians at the present time.

Comparative Cost of Medical Education in England and America.—

According to the estimate of the Secretary of the Illinois Board of Health, the average fees for the eleven London schools are, exclusive of the examination fees, £118, 5s.; for the provincial schools £98. In addition, each student has to pay from 10s. to £3 matriculation to one of the degree-granting bodies; from £1 to £15 for the first examination; from £1 to £10 for the second; from £2 to £15 for the first degree or qualification examination. In some of the colleges in the United States all the fees do not amount to $300, and in at least one the whole course of study and the diploma can be had for $138.

Financial Losses of Sir Joseph Lister.—

Every member of the profession will be sorry to hear that Sir Joseph Lister has, through the bankruptcy of John Taylor, a well known London stock broker, lost upwards of eighteen thousand pounds. It appears that Sir Joseph Lister had entrusted Mr. Taylor with the money to invest in securities, instead of doing which he applied it to his own purposes.—*Hospital Gazette.*

Regulating the Price of Drugs.—

The Medical Department of the Ministry of the Interior in Russia has recently issued a price list of medicines, by which the prices of seventy or more staple drugs have been reduced to a very low rate. The measure was adopted in consequence of the exorbitant charges made by many of the apothecaries in large cities. The publication of the price list is accompanied with an order stating that any druggist who charges a higher price for his medicines than the official list prescribes, will incur the penalty, upon conviction, of a heavy fine.

Effect on Offspring of Consanguineous Marriages.

Drs. Louis and Gustav Lancry publish, in L'Union Medicale, the results of their investigations on this subject. Their conclusions, based on a study of sixty-three consanguineous marriages, are that the marriage of blood relations tends to the diminution of the birth-rate, but that it has no prejudical influence upon the children born of such unions.

Thymolo-acetate of Mercury and Iodide of Potassium the Latest Remedies for Consumption.—

Dr. Tranjen, in Berliner Klinsche Wochenschrift, publishes the results of the hypodermatic injection, daily for seven to ten days, of a solution of thymolo-acetate of mercury in connection with administration of iodide of potassium. Thus far his experience is favorable to this method.

The Influence of Exercise on Digestion.—

Dr. Streng, in a lecture before the Medical Society of Giessen on the Influence of Exercise on the Digestion, which has been published in the Deutsche Medicinische Wochenschrift, states that he concludes from his own experiments that this influence is of a retarding nature.

L'Univers Medical.—

A new journal, with the title L'Univers Médical, has appeared in Paris, under the editorship of Dr. Séxéno, a pupil of Dr. Apostoli.

A Botanical Garden in New York.—

New York is to have an "American Kew" Garden at Bronx Park, which it is expected will some day rival its English prototype.

Therapeutic Brevities.

The Effect of Asparagus on the Urine.—One of the curious by-ways seldom explored by science is that which Professor Nencki, of Berne, has lately investigated (Archiv. f. Exp. Path. u. Pharm., Bd. xxviii, Hft. 3 u. 4). It is, namely, the determination of the familiar change in the odor of urine that follows the eating of asparagus. Hilger attempted to isolate the body causing this odor, by distilling the urine passed after a three days' diet of this vegetable, but he could not arrive at a definite result. Prof. Nencki, availing himself of the good offices of four of the workers in his laboratory who substituted for their mid-day meal a repast of asparagus, collected the urine passed by them up to 8 P. M. on the same day, acidulated it with oxalic acid, and distilled it over a sand bath. The volatile products were conducted into a solution of cyanide of mercury, causing a precipitate therein; and this, together with a similar deposit obtained by another trial, was collected, washed, and, being treated with a small quantity of a 5 per cent. solution of hydrochloric acid, was again heated—the vapor, which had the characteristic odor of methyl-mercaptan, forming a bright-yellow crystalline deposit in a solution of plumbic acetate. The odoriferous body in the urine is therefore in all probability methyl-mercaptan. Previous experiments by Prof. Nencki and M. Sicker, have shown that this substance is one of the products of fermentation of albumen, and also of gelatin, and that it forms one of the constituent gases of the large intestine. Indol and phenol are also derived from the putrefaction of albumen, and it is probable that other sulphur-holding bodies are similarly derived. As to its connexion with asparagus, Professor Nencki quotes an interesting communication form Dr. O. Loew, of Munich, to the effect that asparagin contains an organic sulphur compound, and that it is highly probable that methyl-mercaptan is formed in the albuminous disintegration which takes place in the germination of the plant.—*Lancet*, (London) April 11th, 1891.

Treatment of Fits in Children.—Attention is directed, in a paper published in La Médecine Moderne, to the usual advice of at once removing the clothes of a child afflicted with convulsions, before giving it a warm mustard bath with cold applications to the head. As the seizure is very apt to come from disorder of the digestive tube, a full dose of calomel or of castor oil may be administered with

benefit. The administration of a vermifuge may also be indicated. When there is cerebral hyperæmia, the application of leeches behind the ears may arrest the convulsion. Mustard plasters may be perhaps of value, applied to the lower extremities, or even the compression of the carotids as recommended by Trousseau. A combination of chloral hydrate and bromide of potassium is especially reliable when the convulsions are obstinate. To new-born children the dose of chloral should be only ¾ grain; to nursing infants, 2 grains; 3 to 5 grains to children of two years. When the convulsions have once been subdued, it would be well to continue the use of the bromides, prescribing bathing the head with cold water, general friction, lukewarm baths, and strict regulation of diet. With this may also be combined small doses of calomel and the valerianate and oxide of zinc.

Some Remarks on the Early Treatment of Otitis.—Dr. Samuel Sexton, under the above title, addresses to the editor of the New York Medical Record some timely suggestions as to the early management of cases of acute inflammation in the attic region, especially in children. As the invasion of the disease is rapid, so the remedy should be sure and swift; no stabbing the drum-head in the dark, or fruitless incision into the canal. If the patient is a child, have it narcotized, and then examine the ear carefully, under illumination with the electric headlamp, worn on the forehead of the surgeon. Do not wait for days for spontaneous rupture, while injury may be done to deeper parts by extension of the inflammation, but, with the patient etherized, if a child or nervous adult, make an incision, with a slender but strong paracentesis-knife, through the membrana flaccida well into the attic. Immediate relief follows the liberation of the pent-up secretions. If the operation is done promptly, usually no further treatment is necessary.

Hyoscine in Mania and Insomnia.—Malfilatre and Lemoine report in the Gaz. Mèd. de Paris the result of a trial of hyoscine on some sixty-two patients, chiefly of the maniacal class [Practitioner, xxxii. p. 321.]. The results obtained were very favorable. In the great majority of cases they found they had either an immediate and continued hypnotic effect from very small (three-to-five-tenths cmm.) or moderate (1 cmm.) doses administered hypodermatically, and in only a very few were larger doses required; and also that there did not appear to be such uncomfortable lasting after-symptoms as sometimes contra-indicate the employment of other hypnotics. These investigators feel justified in affirming that in hyoscine we have an excellent palliative in all conditions of insomnia with agitation, but they decline to commit themselves as regards its curative effects. Its inconveniences are the temporary intoxication it produces in some very sensitive individuals, and the necessity of steadily increasing the dose to produce the hypnotic action in some few others.

Chloride of Ethyl as a Local Anæsthetic.—As a substitute for ether spray as a local anæsthetic, M. Monnet has introduced a method of freezing by means of chloride of ethyl, which is highly spoken of by Dr. C. Rédard, Clinical Professor at the Geneva School of Dentistry. Chloride of ethyl is a colorless liquid possessing an ethereal odor, with a boiling point of 50° F. It is hermetically sealed in glass tubes containing ten grammes, one end being drawn out into a fine point. When required for use, the point is broken off with a pair of forceps, or by hand, at the narrowest part, which is marked by a file scratch on the glass, and the warmth of the operator's hand is sufficient to cause a very fine jet of the chloride to be projected on the part to be anæsthetized. One great advantage claimed for this method is, that no apparatus is required, and its use is advocated in such cases as tooth extraction, neuralgia, etc.

Prescriptions for Flatulence.—Journal de Médecine de Paris gives the following prescriptions for the relief of flatulence:

℞ Naphthol, 1 drachm.
Carbonate of magnesium, 1 drachm.
Powdered charcoal, 1 drachm.
Essence of peppermint, 2 drops.

This is to be divided into 15 powders, and 1 taken at the beginning of each meal.

When the flatulency is accompanied by constipation the following may be used:

℞ Magnesium sulphate, 1 drachm.
Flowers of sulphur, 1 drachm.

To be made into 15 powders, 1 of which is to be taken at each meal.

When diarrhœa accompanies the flatulency:

℞ Bicarbonate of sodium, 30 grains.
Prepared chalk, 15 grains.
Powdered nux vomica, 3 grains.

May be made into 10 powders, 1 of which is given with each meal.

Salicin for Pelvic Pain.—Chéron states that in pelvic pain during the course of metritis or salpingo-ovaritis, as well as in pelvic cellulitis and peritonitis, particularly if these troubles are associated with rheumatism, salicin is of value. In those women who, after the menopause, have uterine pain and discomfort in the lumbar or sacral region, with occasional flushes of heat and neuralgic dartings, a careful interrogation as to any history of rheumatism should be sought for, and, if this disease is found to be present, salicin administered. The dose which he ordinarily recommends is fifteen grains, to be divided into three parts. Very soon after the drug is administered the pain decreases. Chéron generally directs that one drachm of salicin be divided into twelve capsules. One of these capsules may be given morning, noon, and night, the patient taking a glass of water at the same time.

Angina Pectoris—Use of Trinitrin.—Huchard, Potain, and Herard have demonstrated that the principle therapeutic use of trinitrin (nitro-glycerin) is in the relief of angina pectoris. Its action is that of a vaso-dilator, which is not only useful in angina pectoris resulting from ischæmia of the cardiac muscle, but of all the affections of the aorta which produce cerebral ischæmia (narrowing and insufficiency). Trinitrin is employed with advantage in severe chlorosis, in neuralgias from anæmic causes, in certain cases of hypochondriasis, when these troubles are vaso-motor and by their intensity produce cerebral anæmia (Dujardin-Beaumetz).

Trinitrin is used in a 1 per cent. alcoholic solution, of which 1 to 3 drops are given internally, and 1 to 2 drops hypodermatically. —*Confrat. Medicale.*

New Procedure in Abscess Treatment.—The treatment of chronic or cold abscess by the method of aspiration and injection of antiseptic solutions, such as iodoform dissolved in ether, is a favorite plan of some French surgeons, and is the one usually adopted for some time past in the wards of M. Verneuil, now the senior of Clinical Surgery in the Paris Faculty; but it seems to have been reserved for Dr. Préchaud, of Bordeaux, to have adopted the method with success in the treatment of acute inflammatory abscesses. Instead of the time-honored free incision of the most dependent part, Dr. Préchaud asperates the abscess, after which he injects a solution, 1 in 1,000, of common sublimate. For the past ten months, he has invariably adopted this method in his hospital practice, with marked success.

Mouth Wash.—David uses the following mixture as a tonic and antiseptic mouth wash (Med. News, Feb. 21st, 1891):

℞ Thymol, 7 grains.
Borax, 15 grains.
Water, 1½ ounces.
M.

A few drops of this are to be placed in a wine-glassful of warm water, and the mouth rinsed with it. In cases in which the breath is fœtid, owing to deposits about the tonsils and gums, the following wash is said to be serviceable:

℞ Borate of sodium, 15 grains.
Alcohol ½ drachm.
Water, 1 pint.
Thymol, 7 grains.
M.

The Treatment of Hiccough.—The Gazette Hebdomadaire gives the following treatment for hiccough. The local treatment is to compress the phrenic nerve and the pneumogastric in the neck by pressure with the index finger, which will often cause immediate cessation of the spasms. The medicinal treatment consists in the administration of a coffee-spoonful of vinegar mixed with a little powdered sugar or the following formula may be used:

℞ Subnitrate of bismuth, 45 grains.
Oxide of zinc,
Valerianate of zinc,
Powdered calumbo, ää 1 drachm.
Powdered opium, ½ grain.
Essence of anise, a sufficient quantity.

Mix thoroughly, and give half a teaspoonful of this powder in a wineglassful of sweetened water.

Aphrodisiac Pills.—According to the Jour. de Médecine de Paris, Lutaud employs the following pills for the purpose of producing sexual stimulation:

℞ Powdered nux vomica, ¾ grain.
Bromide of iron, 15 grains.
Phosphorus, ⅙ grain.
Excipient, a sufficient quantity.

Make into twenty pills and take one each night.

In addition to this treatment the patient should resort to hot and cold douches and gymnastic exercise, massage, and systemic tonics, and frequently coca will be found of value, as in the opinion of Lutaud this drug possesses very distinct aphrodisiac powers.

Hoarseness.—In an excellent article on hoarseness in professional singers (Jour. Amer. Med. Assoc., 1890), Dr. Sajous, of Philadelphia, calls attention, among other better-known conditions, to a deficiency in

the lubrication of the vocal bands, which he successfully combats by the use, every two hours, of a warm spray of a saturated solution of potassium chloride, and the administration of ten grains of ammonium chloride in a tumblerful of water at the same intervals. The last dose is taken at least three hours before a performance to avoid exposure during the subsequent stage of perspiration. Between acts he finds a lozenge containing two grains of the drug to be beneficial in some instances.

Spermin in Surgical Practice.—Dr. Veliaminoff, of St. Petersburg, one of the foremost Russian surgeons, says that he resorted to spermin in four cases of grave and prolonged operations in extremely exhausted patients. The results of the injections (under the skin) were uniformly brilliant: (1) The patients bore the operation in an excellent way: (2) Notwithstanding very large amounts of chloroform used (in one case, in which the operation lasted two-and-a-half hours, as many as six ounces of the anæsthetic agent were spent), the cardiac action left nothing to be desired: (3) The patient's state in the after-period remained reproachless all through.—Dr. N. A. Veliaminoff in *Vratch.*

Wine Lemonade.—Dujardin-Beaumetz recommends a vinous lemonade to promote diuresis in typhoid and other fevers, and gives the following:

℞ Red wine, Oss.
Tartaric acid, ʒ ij.
Water, Oiss.
M.

Laillez recommends the following:

℞ Syrup of citric acid, ʒ ij.
Red wine, ʒ viij.
Essence of lemon, m xv.
Water, O ij. M.

—*Boston Med. & Surg. Jour.*

The Effects of Crystallized Podophyllotoxin.—According to the experiments of J. Neuberger, at the Pharmacological Institute of the University of Leipzig, doses of 0.001 to 0.005 gramme of podophyllotoxin, administered to cats, have proved toxic. Two to four hours after the administration of these doses (whether per os or subcutaneously), violent vomiting ensued, followed by evacuations of the bowels, which were at first solid, and then of a thin liquid and mucous character. The bodily temperature sank; the posterior extremities became paretic, and after convulsions the animal collapsed. In dogs the lethal dose varied between 0.01 and 0.03 gramme.—*Apotheker Zeitung.*

Treatment of Bed-Sore.—Billroth recommends that the part should be bathed with vinegar or lemon juice as soon as erythema appears. Excoriations should be touched with nitrate of silver and the part dressed with simple cerate, or soap plaster spread upon linen or soft leather. When gangrene occurs the surface should be covered with a disinfectant, such as chlorinated water. Carbolic acid should be avoided, because of its liability to cause poisoning. Energetic internal measures should be employed, to strengthen and build up the system, such as wine, acid drinks, quinine and musk.—*L'Union Medicale.*

Treatment of Subacute Laryngitis. — Dr. Faulkner, in the New York Medical Journal, details what in his hands has proved a very successful treatment of sub-acute laryngitis, which so often affects the voice of public speakers and vocalists. The acute symptoms are first treated with a one-per-cent. spray of cocaine, accompanied with aconite internally. After the acute symptoms have subsided, a sixtieth of a grain of strychnine is given after breakfast, the same after the noonday meal, and the thirtieth of a grain in the evening before starting for the rostrum or concert.

Diuretic Effect of Grapes.—Dr. Pecholier, of Montpelier, has published a note on the diuretic effect of grapes, which would appear to confirm the diuretic action of glucose recently brought to notice. In two cases—one a patient with cardiac disease, and the other the subject of hepatic cirrhosis with ascites—a "grape cure" was undertaken, with the best results. In the former patient, notably, five pounds of grapes were daily ingested in three parts, and the diuresis produced was much more considerable than with milk, digitalis, or iodide potassium.—*Dietetic Gazette.*

Euphorbia Pilulifera in Spasmodic Asthma.—Dr. J. H. Jenkins, of Tecumseh, Michigan, recently read a paper in which the history of several cases of spasmodic asthma treated by this drug was given.

The drug was obtained from Australia, where it had a reputation in bronchial affections. The author administered equal parts of the fluid extract of euphorbia and glycerin.

dose about one teaspoonful. It had been of benefit in most cases of spasmodic asthma.

A Mixture for Dissolving Diphtheritic Membranes.—Caldwell recommends the following solution for this purpose:

℞ Pepsin, ʒ ijss.
Hydronaphthol, grs., ij.
Hydrochloric acid, drops, xv.
Distilled water, ℥ iij.
Glycerin, ʒ ij.
M.

This is to be applied to the affected parts by means of an atomizer every half hour.

—*Weekly Medical Review.*

Parasiticide Ointment.—L'Union Médicale gives the following ointment for the destruction of parasites:

℞ Salicylic acid, 45 grains.
Borax, 15 grains.
Balsam of Peru, 30 grains.
Etherial essence of anise, 5 drops.
Essence of bergamot, 20 drops.
Vaselin, 6 drachms.

Make into an ointment and apply to the part affected.

Ergot for Gonorrhœa.—Roicki, in the Gazette de Gynæcologie, considers ergot as an excellent injection for the rapid cure of chronic gonorrhœa. He administers it at the same time by the mouth in the form of pills, and by urethral injection after the following formula:

℞ Ergotin, 4½ grains.
Distilled water, 9 ounces.
Use as an injection several times a day.

These injections are very well borne. The same treatment is also applicable for other urethral hæmorrhages.

Sedatives for Babies. — Dr. Van Goidstnoven, of Atlanta, gives a formula with which he has had most gratifying results in restlessness, spasms, deliria, and in all cases requiring a sedative, anodyne, anti-spasmodic, or somnifacient:

℞ Camphor monobromat., gr. xvj.
Ext. hyoscyami fl., gtt. xvi–xxx.
Syrup lactucarii, f ℥ viij.
M. Sig.—A teaspoonful every hour till relieved.

Injection for Gonorrhœa.—A new specific for gonorrhœa is a one-per-cent. solution of creosote in decoction of hamamelis combined with boric acid. It is claimed that this will destroy the gonococci in two hours.

Medical Progress.

The Gibbes-Shurly Method of Treating Phthisis.—Phthisis pulmonalis is an inflammatory process, of greater or less degree, resulting in permanent or destructive changes of the tissues, accompanied by the production of deleterious chemical substances which set up constitutional disturbances and exhaust the vital forces.

We have been working for the last few years to discover something which would neutralize this disease process, with the result that we find chlorine gas, iodine, ammonium iodide, double salt of chloride of gold and sodium, liquor potassæ, potassium permanganate, iron arseniate, mercurial salts, etc., to do good service. Chlorine gas, iodine, and the double salt of gold and sodium chloride however, are by far the most efficacious. In the first place, these substances must be chemically pure, and the solution must contain glycerin.

There are two modes of administering chlorine: First, gas may be evolved from chlorinated lime in a small room or compartment of about 550 cubic feet space. Before the gas is evolved, the atmosphere should be well-charged with a spray of a saturated solution of sodium chloride. This spray should be continued during the evolution of the gas; in fact, during most of the time the patient is there. The patient is directed to keep the mouth closed and breathe through the nose. The first sitting may be about two minutes; subsequently, may be increased to twenty or thirty minutes; one or at the most two sittings are sufficient, although some cases require three or four daily:

Second, preferably for mild cases and laryngeal phthisis, the inhalation of chlorin water. Patients showing considerable ulceration, will need frequent sittings and stronger solutions. A face-inhaler offers the best mode of administration.

Chlorine inhalations seem to be very efficacious in preventing further caseation, as shown by changes in the matter expectorated, and also by the physical signs under its use. A varying intolerance of chlorine gas will be observed from time to time, probably owing to the quantity of secretion present in the bronchial tubes at the time of the inhalation. Usually, it is better for the patient to inhale soon after a thorough expectoration and not too near meal times, as not infrequently irritation of the stomach is developed. The gas is practically irrespirable, except in the presence of the vapor of chloride of sodium

On account of the changes which chemicals undergo in the stomach and intestines before diffusion through the system, it is almost impossible to obtain certain effects upon specific morbid products, known as oxalbumens. Therefore, we availed ourselves of the hypodermatic method. The instrument should be provided with either gold or platinum-plated needles, and the syringe kept clean and aseptic. Owing to the action of both iodine and gold on packing and needle, it is difficult to keep the instrument in order without the greatest attention.

Regarding the place for insertion, the gluteal region is preferred, because there is less danger of abscess or ulceration of the skin.

The iodine solution gives considerable pain to some people; to others little; the gold solution, little or none. With the majority of patients, it is better to begin with $\frac{1}{12}$ gr. iodine daily, gradually increasing to $\frac{1}{2}$ and in some instances 1 gr. Then the gold and sodium may be injected daily, beginning with $\frac{1}{30}$ or $\frac{1}{20}$ gr. and increasing up to $\frac{1}{5}$ or even $\frac{1}{3}$, when the quantity should be diminished to $\frac{1}{10}$ gr. daily, if the medication is to be continued. At this stage, it will be found better to alternate, one day using iodine, the next gold.

If albumen appears in the urine, iodine should be suspended and gold alone used. The continuance of large doses of the gold and sodium salt may produce a golden color of the skin which can possibly be attributed to bile. During the administration of iodine in this way, the patient usually loses weight, and if possessing any tendency to catarrh of the bladder or intestines, this condition may be again set up.

The temperature usually increases for a week or ten days, and may be accompanied by excessive sweating. The expectoration soon becomes lessened, and watery later on. Asthmatic symptoms and loss of appetite may in some instances supervene, the tongue becoming heavily coated, and when the point of saturation is reached, diarrhœa comes on, the throat is dry and the patient listless. The pulse may be quickened, but does not seem to lose its tension. These symptoms occur only in a small percentage of cases. The injection of gold and sodium in these cases is followed by a tonic reaction, the symptoms gradually disappearing, except perhaps the loss of appetite. If the doses are large, vertigo and nausea may occasionally appear. Experience shows the majority of the patients do better on small doses. There is little or no tendency to hæmorrhage, although blood-streaked mucous is sometimes observed under large doses of iodine. After two or three weeks, as a rule, these chemicals ought to be used alternately every day or every other day, finally once or twice a week. Iodine cannot be used alone for any great length of time, but the gold and sodium salt can. Therefore, by using them alternately, the effect of the iodine may be prolonged.

Case.—F. V. (phthisis pulmonalis), aged 28, farmer, married, damp surroundings, poor circumstances, family history good; never fleshy; tolerably well until three years ago when began coughing; coughed and expectorated more or less for the last six months; has had fever and chills; night sweats; is losing weight. Expectoration streaked with blood occasionally; has never had hæmorrhage.

Dec. 31st.—Appearance pale and thin. Respiration 32, pulse 86, temperature 101.5°, skin moist, bowels regular, appetite poor; shortness of breath on slight exertion; erratic pain in the chest and abdomen; tubercle bacilli in the sputum; urine contains oxalates; chest small, movement short and rapid; respiratory movement diminished; percussion-sound high pitched over right side; increased bronchial respiration; broncophony; mucous click over upper right front and back, and subcrepitant râles; slight œdema of the larynx.

Treatment. — Hypodermatic injection of iodine $\frac{1}{12}$ grain evening, increasing to $\frac{1}{2}$ grain. Chlorine inhalations (2 drachms of chloride of lime) twice daily; dilute hydrochloric acid, 10 minims three times a day before eating. Croton and olive oil liniment to chest.

From Dec. 31st to Jan. 14th, temperature ranged from 98° to 98.5° in the morning, and 101° to 101.5° in the evening, reaching 102° on the 7th, 8th, and 10th; after injection of ½ grain of iodine on the 7th and 8th, pulse 108; respiration ranged from 20 to 30 and 34. On 10th, had pain in the abdomen, restless; also had diarrhœa—watery discharge. Expectoration very much increased up to 9th, when it began to decrease. On account of nausea following chlorine inhalations, they were first diminished, then discontinued from 14th to 18th, and again resumed with a small quantity of gas evolved. Hypodermatic injections continued on the 18th at $\frac{1}{6}$ grain; on the 20th, severe nausea and vomiting, when Hoffmann's anodyne was given for a few nights. Temperature ranged from 15th Jan. to 10th Feb., from 98.5°, morning, to 99.5°, evening, excepting on the 26th, 27th, and 28th, when it reached 101°. Very little night-sweating at this period. Physical examination on 11th Jan. showed bron-

chial respiration with no râles, except on forced inspiration on the 9th of Feb. Auscultation showed still more clearing, but with some slight moist crackling over left clavicular region. On Jan. 25th hydrochloric acid was discontinued, and a tablespoonful of Parke, Davis & Co.'s Maltale given three times a day. He is still increasing in strength, and has much less expectoration; the stomach is less irritable (March 20th, 1891).

Case II.—F. D. H., aged 36; married; one child; hygienic surroundings excellent; habits good; hard worker; compelled to give up work entirely for the last two months; lost mother, one brother, two paternal uncles, an aunt, and two half sisters from consumption. Patient not very strong. At 17 had four copious hæmorrhages from lungs, but was not confined to bed until two years ago; has had frequent hæmorrhages since, varying from one or two ounces to a pint. Has had slight coughs since 15 years of age; grown much worse lately; since having had the "*grippe*," has been still worse, with frequent night-sweats. During the past year has had superficial ulcers on legs, which discharged a week or two before healing. Appetite and digestion poor; not able to digest oils or fatty meats; constipated all the time; does not sleep well; more or less pain; shortness of breath at times amounting to dyspnœa.

Jan. 29th, 1891.—Very much emaciated, tongue coated, panting respiration, very weak, cannot walk, skin moist, anxious expression of countenance, repiration 28, pulse 100, temperature 99° in the morning; considerable cough, not much expectoration; urine scanty, shows albumen and pus.

Hypodermatic injections of iodine, beginning Jan. 20th and continued to Feb. 7th, when ½ grain was given. Repeated on the 8th and 9th, when it was diminished to $\frac{1}{10}$ grain, because of eruptions, coryza, watery expectoration and dryness of throat. A few days later, increased to $\frac{1}{8}$ grain again; so continued up to the time he left the hospital. On account of shallow chest expansion, the pneumatic cabinet treatment was commenced on Feb. 6th; at first, continued for two minutes with two inches diminution of pressure, and gradually increased to two sittings daily of four or five minutes each, with diminution of three to four inches pressure. Temperature ranged between 98° and 100° and 105° (P.M.) of Feb. 2d, when evening temperature 99°, and the following day fell to 98.5°. This range of temperature continued, excepting on the 7th and 16th, when it rose to 100° and 105° respectively. On 16th he suffered considerably from dyspnœa, presenting the appearance of asthma. This asthmatic character continued more or less until his departur March 9th.

Feb. 9th.—Physical exploration of th chest showed disappearance of moist râle but dry crackling râles over left upper fro and back, with creaking and jerky respira tion over upper right front.

Feb. 16th.—Sibilant râles general over le lung and over upper right front. Puls ranged between 80 and 100 after Feb. 9t increasing to 110 on the 16th after, for hir a long walk. When he left the hospita March 9th, had gained eight lbs; gener strength better than for two years; was ab to walk half a mile easily; appetite and d gestion very much improved.

Received no anodyne medication and r stimulants except Parke, Davis & Co.'s Mal ale, three times daily; his nourishment co sisted of Mosquera Beef Meal and Be Cacao, meat balls and eggs. Undoubtedly case of so-called "quick consumption," chronic catarrhal pneumonia. He is still in proving since his return home, and receiv one hypodermatic injection per week of grain iodine.

These two cases are typical of the enti series of 26 presented by Drs. Gibbes ar Shurly. The first represents ordinary co sumption, or phthisis pulmonalis; the secon so-called "quick consumption." As may b seen, the general outline of treatment is:

1st. Chlorine inhalation to prevent furth caseation, or further solidifying of the lun the gas being respired in a vapor of comm salt:

2d. Subcutaneous injection of iodine doses ranging from $\frac{1}{12}$ to $\frac{1}{2}$ grain, as deman ed, alternating if necessary or if desirab with solution chloride of gold and sodiu $\frac{1}{30}$ to $\frac{1}{6}$ or even $\frac{1}{3}$ grain. If iodine cannot b borne, gold and sodium salt used alone.

3d. Increased nutrition to the utmost abi ity of the patient. Administration of fat Mosquera's Beef Meal (teaspoonful in mi every two hours); Mosquera's Beef Caca Parke, Davis & Co.'s Maltale and Emulsio of Eulachon oil; eggs; bone meal.

Where there is anæmia, carbonate of iro is added to bone meal. If night-sweats a so excessive as to demand restraint, codei is given at night, and, when deemed advis ble, preceded by a hypodermatic injection cocaine. The pneumatic cabinet is som times found of value, but must needs be use with caution. Some cases seem benefited b the administration of ammonium iodide, wit syrup of tolu where cough demands. Sed tives have frequently to be given for pa and restlessness. The administration of di

isible stimulants other than Maltale may on ccasion seem advisable.—Abstract of paper y Drs. Gibbes and Shurly in *Therapeutic azette.*

Diphtheria—Its Cause—Its Prevention—Its Treatment.—In a paper on phtheria, by Wm. Welch, M. D., Professor Pathology, Johns Hopkins University, ad before the Medical and Chirurgical tate Society of Maryland, and published in e Medical News, May 16th, is presented a holarly résumé of the existing knowledge this disease. Dr. Welch makes the fol-wing statements as to the cause, preven-on and treatment of diphtheria:

The so-called Klebs-Löffler bacillus is ally the specific agent of infection in diph-neria.

It is now established that this bacillus is nstantly present in large number in the seudo-membranes of all cases of primary phtheria, and that no other species of bac-ria is constantly to be found in this situa-on. The expectation expressed a year ago y Löffler that the results on this point ould not be found to be different in this untry from those in Europe, has been ful-lled by the bacteriological examination by r. Abbott and myself of a series of cases of rimary diphtheria occurring in Baltimore ity, in all of which we found the Löffler acillus as the only constant organism, as ell as by the latest publication of Dr. Prud-en. The occurrence of a bacillus, with all e properties of the virulent diphtheritic acillus, in persons not affected with diph-neria, is so extremely exceptional that Löf-er, notwithstanding years of searching, has een able to find it only once under such ircumstances.

Of capital importance is the establishment f the fact that the diphtheritic bacillus evelops only locally at the site of infection, nd does not invade the tissues or the circu-tion. It is found only in the diphtheritic seudo-nembrane, and not even in the sub-acent mucous membrane. Indeed, it is only e superficial parts of the false membranes hich contain the bacilli. The determina-on of this fact gives at once a clear and ecisive answer to the long-mooted question s to the primarily local or constitutional ature of diphtheria. Diphtheria is, without doubt, local in its origin. The germ which auses this disease not only makes its first ppearance and multiplies where the pseudo-embrane is formed, but it does not even ubsequently invade the blood and organs. s we shall see later, the constitutional ymptoms are due to the reception of a chemical substance or substances of remarkable toxic properties, produced by the local development of the diphtheritic bacillus. This settlement of the controversy as to the local or the constitutional origin of diphtheria is one of the most important outcomes of the bacteriological study of this affection, for the question pertains to a fundamental point in our conception of the disease. Nevertheless, from the point of view from which this controversy has usually been waged, the triumph is, in my opinion, only a partial one for the localists, for, as will be shown later, I believe there are reasons as strong as ever for the employment of constitutional measures of treatment in combination with the local ones.

The data at present at hand are insufficient to settle the burning question as to the existence, independent of diphtheria, of a disease called membranous croup, supposed to be of a purely local, non-contagious character. Not a few cases of pseudo-membranous laryngitis, without membranes on the tonsils or pharynx, have been examined, with the result of finding the Löffler bacillus. One such case, diagnosticated by the physician as croup, will be found in the series reported by Dr. Abbott and myself. In this we detected in large numbers the diphtheritic bacilli on the mucous membrane of the pharynx, although no membranous deposit was visible, and similar results have been recorded by others, so that there is no doubt that diphtheria may occur with membranous inflammation limited to the larynx. In Dr. Prudden's first series of cases there were some instances of pseudo-membranous inflammation confined to the larynx and trachea in which streptococci, but no Löffler bacilli, were found, so that it is probable that pseudo-membranous laryngitis, without involvement of the tonsils or pharynx, may be produced by the streptococcus. But whether or not membranous croup may occur in the sense advocated as a purely local, non-contagious affection, cannot be said to have been settled by bacteriological investigations.

In considering what can be done to render children less vulnerable to diphtheria, and to ward off an attack after exposure to the disease, the question arises: What conditions of the individual may we regard as predisposing causes? Clinical experience, as well as experiments upon animals, indicate that morbid states of the mucous membrane of the throat, such as ordinary catarrhal inflammations, swollen tonsils, sensitiveness to "catching cold," the existence of measles and scarlatina, are predisposing factors. At all times, but especially during the epidemic

prevalence of diphtheria, it is important to hold in check these morbid states as far as possible. Experiments upon animals would seem to indicate that some lesion of the mucous membrane is essential for the lodgment and multiplication of the diphtheritic bacilli; but it would be entirely unjustifiable to transfer directly to human beings the results of these experiments without warrant from clinical experience; and while this experience shows the importance of such lesion, it also shows that perfectly healthy children may be attacked by diphtheria, so that we have no right to assert that in human beings infection with the diphtheritic bacilli cannot occur without pre-existing alteration of the mucous membrane. The frequency and readiness with which the tonsils become the seat of the diphtheritic process, may be explained by the peculiar anatomical structure of these parts, as has been shown by the researches especially of Stöhr and of Hodenpyl. The rarefaction of the covering epithelium, and the emigration of leucocytes to the surface, found as a normal condition, seem to render the tonsils particularly vulnerable to the lodgment of the diphtheritic bacilli; and the lymphatic structures, here normally laid almost bare, are favorable for the absorption of the toxic products of the bacilli, as has been pointed out in the recent interesting paper of Hodenpyl, "On the Anatomy and Physiology of the Faucial Tonsils."

The prophylactic value, in persons liable to exposure to diphtheria, of cleanliness of the teeth and mouth, and of the frequent use of weak antiseptic mouth-washes, nasal douches, and gargles, is worthy the attention of physicians. For this purpose Löffler recommends aromatic waters, weak sublimate solutions (1:10,000 to 1:15,000), or, perhaps better, solutions of mercuric cyanide (1: 8,000 to 1: 10,000); also, chloroform water, chlorine water (1: 1100), thymol (1:500 parts of 20 per cent. alcohol). The use of some of these solutions evidently involves danger of poisoning in children unless special precautions are taken.

The suggestion recently made by Dr. Jacobi, that, in addition to caring for those sick with diphtheria places of refuge should be provided for the temporary stay of children sent from home to escape infection, seems practical and calculated to meet the circumstances of many families.

The dominant *rôle* often played by schools in the spread of diphtheria, throughout a community, renders especially urgent the introduction of a system of daily medical inspection of the schools.

The importance of letting air and sunlight into dark, damp dwellings, and of attending in general to matters of domestic sanitation is a lesson plainly to be drawn from the history of such places as nests of diphtheria.

If the researches relating to the ætiology of diphtheria, which have been so fruitful in recent years, have not added to the list of agents—whose name is legion—employed in the treatment of this disease, they have given precision to the indications for treatment. From what has been said concerning the localization of the diphtheritic bacilli, and the peculiar characters of the toxic substances produced by them, it is apparent that the strongest indications exist, on the one hand, for the earliest possible local treatment by germicides, and, on the other, for the destruction of the poison in the system, and, in the absence of any antidote, for supporting measures of treatment which shall enable the body to withstand the effects of the poison.

Can Simple Vaginitis be Distinguished from that of Gonorrhœal Origin?—When in adults, the discharge has appeared suddenly, is purulent in character, and in its early stages has been associated with scalding pain on micturition, a hot and tender vagina with bright red points covering the mucous membrane, and with a red, velvety or granular os uteri, the probabilities are altogether in favor of gonorrhœa. And yet it is doubtful whether many men could be found willing to take the witness stand and declare positively, from the symptoms and appearances we have described, that the disease is gonorrhœa. The difficulty becomes still greater when the patient is not an adult, but a child. Fortunately the cases of gonorrhœa in little girls are much less frequent in this country than they appear to be on the continent of Europe.

The discovery of the so-called "gonococcus" by Neisser, was hailed by many with enthusiasm. But it was scarcely discovered before assertions were made that it could be found in non-specific discharges, and that it could not be distinguished under the microscope from other bacteria, particularly diplococci. The latter conclusion is the one to which Vibert and Bordas have come. These writers have investigated, from a medico-legal point of view, the discharge present in the vulvitis of little girls, and declare microscopic examination of such discharge never enables an expert to affirm that a particular vulvitis is or is not gonorrhœal. They find the gonococcus practically indistinguishable from the diplococcus—both bacteria, they say, have the same form and dimensions,

the same arrangement in masses and heaps, and not in chains, and they stain alike and are alike deprived of their stain by alcohol.

It not infrequently happens that men are accused of having committed rape upon little girls, and sometimes vulvitis is adduced as one of the evidences of the violation. A vulvitis, however, has been found in a violated child, although the person guilty of the rape was free from any evidences of urethral disease. It would seem to be impossible, therefore, in the present state of our knowledge of the bacteriology of gonorrhœa, to base upon it a diagnosis sufficiently positive to warrant a judgment by the court in a criminal suit. No doubt this difficulty will be overcome by-and-by, and perhaps by cultivation the gonococcus can be distinguished from the diplococcus. But just now the conclusion seems to be that our methods of detecting the gonococcus are not precise enough for medico-legal purposes.—*Phila. Med. and Surg. Reporter.*

THE TURKISH BATH IN PHTHISIS.—Dr. M. Altdorfer, gives valuable testimony to the efficacy of the Turkish bath in pulmonary phthisis in a letter to the British Medical Journal. He writes:—"I have only had occasion to use this mode of treatment in the incipient stage of the disease, but in these cases the results have been most satisfactory. The improvement could always be proved objectively by the physical signs; but the most marked effects were observed in regard to night sweats, appetite, and body weight. The latter always increased. One patient gained seven pounds in four weeks, although he had lost fourteen pounds during the preceding twelve months. Concerning weight, I would like to state I find it generally much more difficult to reduce the body weight by means of the Turkish bath than the reverse, and I have seen delicate patients taking one bath daily gain as much as five pounds in one week—a fact which is, in my opinion, principally due to the improved appetite and the better assimilation of food. I am, however, not inclined to attribute the beneficial effect of the Turkish bath, in cases of tuberculosis, to the direct action of the high temperature on the bacilli. Mosso and Bondelli have proved by experiments the temperature in the larynx of a dog inhaling air heated to 320° F. rises only to 100.4°, and in the bronchial tubes to 100.0°, and the blood temperature of a person staying in the hot room, as in a Turkish bath, is only raised by a few degrees, owing to the evaporation of the perspiration. The highest temperature measured by myself in a man who stayed for half an hour in a room of 160° was 102°; as a rule the temperature was one or two degrees less. My belief is that the curative action of the Turkish bath must be explained by the assistance given to the cells in their struggle with the invading bacilli. By the moderately raised temperature of the blood, the cells, especially the phagocytes, are roused to a greater activity, similarly as in a feverish state; at the same time, the toxic products of the bacilli—the 'ptomaines' or 'toxines'—are partly eliminated through the greater activity of the organs of excretion, the skin, kidneys, lungs, and partly destroyed or made innocuous through more lively oxydations within the body. That the processes of oxydation, as well as the absorption of oxygen into the blood, are greatly increased, not only in the hot room, but more especially after the applications of cold water with which we wind up the Turkish bath, I have pointed out in a paper published some time ago."—*Hospital Gazette.*

TREATMENT OF AN ACUTE ATTACK OF HAY FEVER.—Isidor Gluck, M. D., in Medical record, states that an acute attack of hay fever can be aborted in from two to five days, by the local application of atropine sulphate. His method he describes as follows:

Sulphate of atropine, when locally applied to the nasal mucous membrane, acts as a depressant, as a local sedative upon the end fibres of the sensory nerves. It also affects the vaso-motor and afferent nerves. It causes contraction of the arterioles, relieves and prevents reflex phenomena such as paroxysmal sneezing. It depresses the activity of the glandular elements and thus diminishes the secretion of an exudate, which, being of an irritating character, causes the violent paroxysmal sneezing and other reflex phenomena often found associated with fever.

Absorption from the mucous membrane of the nose being very rapid, the first physiological effect from a local application in children and young adults will manifest itself in from five to seven minutes, and will disappear in from thirty to forty minutes. In adults the effect lasts much longer; drowsiness may last for hours. The mode of treatment employed in the case recorded was as follows:

Realizing that any irritation will aggravate an attack, I avoided all sprays. I dipped a piece of absorbent cotton attached to a cotton holder, in a solution of cocaine-phenol, formula of which I published in the

Medical Record, New York, June 20th, 1890, and applied the solution to the engorged parts. After some contraction and moderate amount of anæsthesia had been produced, I applied, in the same manner, a one per cent. solution of sulphate of atropine. Internally I prescribed small doses of aconitine every hour or two, according to the severity of the case. Next day patients were invariably better. I continued same treatment until recovery. In addition to the local treatment, I am in the habit of prescribing a tonic containing phosphate of iron and quinine.

Cocaine-phenol is especially advantageous in the treatment of hay fever. But a cocaine solution applied without the phenol will cause irritation and sneezing, which lasts until the first effect of the anæsthesia sets in; whereas the phenol, the very moment it is applied, produces anæsthesia to a certain degree, sufficient to counteract the irritation produced by the application.

Ligature of the Saphena Vein in Cases of Varicose Veins.—Professor Trendelenburg advocates double ligature and division of the large saphena vein in the treatment of varicosity of the lower limb involving both the trunk and branches of this vessel (British Medical Journal). In some remarks on the pathological anatomy of varicose veins, it is pointed out that the most prominent and dilated portions of the affected vessel are found below, and not, as is generally supposed, above the valves. The walls of the vein, being weaker here than at other points, yield most readily to the pressure of the blood when the valves cease to act. According to Trendelenburg, most of the blood which fills the dilated trunk and branches of a varicose saphena vein is derived from above, and has descended from the iliac veins and the vena cava, and but a small portion of it comes from the capillaries of the foot and leg. When the subject of varicose vein exchanges the horizontal for the vertical position, a large quantity of blood at once descends from the large veins of the abdomen into the dilated veins of the lower extremity. It is this free downward flow of blood along large and dilated vessels, deprived of valves, that causes the profuse and dangerous hæmorrhage so frequently produced by a breach of the surface of the leg when in a condition of varicosity. The conclusion that the troubles and dangers of those suffering from varicose veins of the lower limb are due for the most part to the fact that the varicose branches of the great saphena, in consequence of associated dilatation of the trunk of this vein, are no longer separated from the vena cava by valves, has led Trendelenburg to treat varicosity by permanently obstructing the saphenous trunk at one point, with the view of preventing the descent of blood from the abdomen, and thus relieving the veins of the leg and foot from the abnormal pressure. After obstruction of the flow of blood through the main trunk of the great saphena, the venous circulation will be maintained by communicating branches between the superficial and deep veins. Reference is made to a series of cases in which good results followed such treatment, which consists in exposure of the vein near the saphenous opening, in the application of two catgut ligatures, and in the division, between these, of the vessel. It is acknowledged that occlusion of the great saphena is by no means a novel plan of treatment in cases of varicosity of the lower extremity. It was practiced by Paulus Ægineta, and advocated by Ambroise Paré, and at the end of the last century Sir Everard Home performed this operation in twelve cases with very unfavorable results.

Aborting Pneumonia.—Dr. O. J. Roskoten, in the Medical Record, states in acute lobar pneumonia he has met with success in aborting the extension of the inflammation by the use of the following formula:

℞ Ext. fl. jaborandi, ʒ iij.
Liq. ammon. acet., ℥ j.
Tinct. aromat., ʒ ij.
Syrupi aromat., ℥ j.
Aquæ dest., q. s. ut. ft. ʒ iv.
M. Sig. Tablespoonful every hour until thorough effect, then half doses every two hours.

During last year's run of "*la grippe*," he freely used the remedy, with the result that he has not met with a single instance of pneumonia in the course of the epidemic, although the number of cases treated was quite large.

The theoretical objection to jaborandi or pilocarpine, on the ground of its being a depressant to the heart, he has met by the addition of aromatic stimulants, and in one or two cases, by digitalis. He aimed to have each dose absorbed in a little less than one hour, delaying absorption (if the stomach was empty) by having it diluted with a small quantity of hot water or tea, in order to avoid a too suddenly violent effect and attendant dangers; and for this reason he prefers the extract to the active principle. In very weak persons, and in those afflicted with fatty or valvular disease of the heart, the remedy in efficient doses is undoubtedly dangerous.

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Original Articles.

ABDOMINAL SURGERY AT THE KENSINGTON HOSPITAL FOR WOMEN.*

BY CHARLES P. NOBLE, M.D.†

The following report embraces all cases of abdominal section done in the Kensington Hospital for Women during my connection therewith; cases of hernia, as forming a special class, are excluded. The number of operations was eighty-five, being the work of three operators—Drs. Kelly, Robb, and myself. As it is manifestly impossible to report these cases in detail, they will be given in groups, with comments on the nature of each class; and to add to the practical value of the report, I will give the lessons learned and the impressions formed from the study of these cases.

Certain definite principles have been followed in the selection of cases for operation. Operation has been recommended in all cases of ovarian and par-ovarian tumors, ovarian abscess, pyo-salpinx, hæmato-salpinx, and hydro-salpinx, unless organic disease of the vital organs clearly forbade; in cases of fibroid tumor of the uterus in which hæmorrhage or pressure symptoms seemed to demand; in cases of extra-uterine pregnancy, both before and after rupture; also in certain cases of simple salpingitis and of ovaritis in which well directed treatment, long continued, failed of relief, and in which life was made burdensome by the continuance of the disease. Operation has been refused only in cases of serious disease, or of advanced cancer.

Whenever practicable, for a week prior to operation, patients have been put upon simple food, the bowels gently purged, and the skin made clean and active by warm baths given daily or on alternate days. This regimen is considered especially important for cachectic women with sluggish emunctories. When time is precious, a purge is given, and a thorough bath. As my experience grows, I become more convinced of the advantage of preparatory treatment extending over weeks and months in chronic, broken-down cases. The nutrition of such cases should be improved in every way, and the state of their emunctories be carefully studied. In acute cases, if operation is to be done, all delay is pernicious. Before operation, the belly is scrubbed with soap and water, alcohol, and sublimate solution 1:1000.

I believe the essentials for success in abdominal operations are: Asepsis; rapid, careful, and thorough operating; and in septic cases, thorough irrigation and drainage.

To secure asepsis, an elaborate *technique* is faithfully followed. The doctrine that infection comes by contact, is fully believed; hence everything coming in contact with the patient is rendered aseptic.

The hands and arms of the surgeon and assistants are washed carefully through three waters, a good lather being made of soap, and the nail-brush vigorously applied, especial attention being given to the subungual space; ten minutes are consumed in the process, when the hands are immersed in a saturated solution of permanganate of potassium; next in a saturated solution of oxalic acid; and finally in 1:1000 solution of corrosive sublimate, in which they remain three minutes. Whenever the skin about the fingers is chapped, or the hands have been recently exposed to septic material, the fingers are soaked in peroxide of hydrogen solution before the sublimate bath is used.

For dressings, gauze is prepared by tearing cheese cloth in squares of one yard, which are boiled in a solution of carbonate of sodium, two drachms to the gallon, for twenty minutes; then washed through pure boiled water four times; wrung out and soaked in sublimate solution, 1–500, for one

* Read before the Philadelphia County Medical Society, April 8th, 1891.

† Surgeon in charge.

hour; then preserved in alcohol. Before use each is washed in sterilized water.

Chinese silk is used, and prepared by winding on spools, boiling for twenty minutes, soaking for three hours in sublimate solution, 1–1000, and preserving in four per cent. carbolized alcohol; before each operation it is boiled fifteen minutes; and in the future I propose to sterilize in the steam sterilizer.

Catgut is prepared by heating in a sterilizer for four hours, gradually increasing the heat to 280° F.; the last half hour the heat varies from 250° F. to 280° F.; it is then preserved in carbolized alcohol, four per cent.

Sponges are prepared by beating to get rid of dust; soaked in hydrochloric acid solution, one drachm to the pint, for from twelve to twenty-four hours; washed through twelve to sixteen waters,—until the water ceases to look yellow; soaked in sublimate solution, 1–1000, for twelve hours, then transferred to carbolic acid solution, four per cent. for preservation. Varying qualities of sponges are used, from the reef sponge to the potter's sponge—the cost varying from one to fifty cents each. The coarse sponges are bleached by "White's method" before washing; and before using all sponges are washed in boiled water, and used but once. By exercising some care, the average cost for sponges for each operation will not exceed fifteen cents. In comparison with the assurance of always having aseptic sponges, this is nothing.

Instruments are kept aseptic, and before each operation are sterilized in an Arnold's steam sterilizer for one hour. Formerly, a Rohrbeck's dry hot air oven was used—temperature 250° F. to 300° F.—for two hours, but this spoiled the temper of steel instruments. After a clean operation the instruments are thoroughly washed and scalded, special attention being given to French joints and irregularities. After a septic operation the instruments are sterilized again for one hour, then dried and put away.

Basins and trays, before operation, are thoroughly washed with soap and water, scalded, washed with sublimate solution, and then filled with boiling water. After operation the same process is repeated, and after septic operations, they are soaked over night in sublimate solution.

Towels used about the patient have been preserved in four-per-cent. carbolic acid solution or freshly sterilized with steam.

The nurse for the operation is kept away from septic cases should such be in the hospital. She has a bath and a fresh suit before entering the room.

Formerly, when the hospital had no operating room, the room selected was scrubbed, aired for twenty-four hours, and then the woodwork wiped with sublimate solution, 1-1000. All tables were likewise wiped with sublimate solution. Now, with a model operating room, having tiled floor and walls, abundant light, and special ventilation, the walls are wiped, the floor scrubbed and flushed with water—which runs into an *open* roof spout, thus obtaining a sewer connection. After foul operations sublimate solution is used. Every facility for obtaining and maintaining cleanliness and asepsis is afforded by the apparatus in the room. Washbowls with an abundance of running water are very convenient for washing the hands, instruments and basins. The room, when in use, is protected from sewer gas by the best modern plumbing, while the waste-pipe leading from the operating room is doubly ventilated; further ventilation is afforded by the most modern traps; between operating days the waste-pipe from the operating room is shut off from the sewer by an air-tight valve. Thus a maximum protection is afforded against septic hands, instruments and appliances, with a minimum danger of atmospheric pollution.

Clean water is obtained by means of a filter, and is sterilized in a jacketed kettle heated with steam from the boiler.

The room is warmed with steam, by the system of indirect radiation, and is ventilated by a warm ventilating flue. The temperature is kept at 75° F.

Ether was used formerly for all cases. Various bad results have made me believe that chloroform is a better anæsthetic for the abdominal surgeon, hence, I no longer use ether in old women, or when bronchitis, nephritis or organic heart disease exists. I have found cachectic subjects, "wrecks," and fat women take ether badly. The

anæsthetic is given late, so that the operator waits for the patient, rather than the patient for the operator. I believe anæsthesia in itself to be dangerous, and that the danger increases with the duration of the anæsthesia. From ether I have had "collapse" once; pneumonia once; bronchitis twice; uræmia and death twice. From chloroform "collapse" once; uræmia and death once.

The *technique* employed is not peculiar. I believe in rapid, careful, and thorough work. This is shown by the fact that only two exploratory operations are found in the list. No chemical antiseptics are used during operation, but the instruments and sponges are kept in sterilized water.

In non-septic cases, such as simple ovarian tumors, the peritoneum is simply sponged dry before closing the wounds; in these cases the aseptic *technique* employed, completely fills every scientific requirement. No sepsis is in the peritoneum before operation, none is introduced during operation, hence none is present after operation.

In septic operations, including pus accumulations, hæmato- and hydro-salpinx, more or less irrigation is used. If the presence of sepsis be doubtful, as for instance from the escape of some fluid from a hydrosalpinx, water is poured into the pelvis, and it is sponged dry. If septic matter has escaped in small amount, the pelvis is irrigated with sterilized water—care being taken to protect the general peritoneal cavity. When large amounts of septic material are to be removed, I use the "flusher," and irrigate the entire peritoneum with gallons of water. This process requires time, and entails shock. I do not like it altogether, yet know of no substitute. In septic cases, the scientific requirements are not met by an aseptic *technique*. The "flusher" may disseminate the septic matter throughout the peritoneal cavity. Moreover, when plain sterilized water is used, septic foci in the belly are not disinfected. Yet practically the results obtained in such cases by asepsis with free irrigation and drainage are much better than by the use of chemical solutions to disinfect the peritoneal cavity. Hence until some disinfectant is discovered which will kill germs without irritating the peritoneum, the present plan must be adhered to. I only use sublimate solution in the belly to disinfect a limited area, such as a pedicle. It should be used on a sponge, sparingly. The peroxide of hydrogen may prove useful for this purpose.

In abdominal surgery, aseptic silk is the best material for ligatures and sutures.

Drainage is necessary for safety in all cases having dense adhesions, and I believe is always of advantage; hence, I use it in almost every case. When the drainage tube is properly cared for, I believe there is no objection which can be urged against it. The plea that it favors hernia is apparently an objection, but it only so favors when left in too long a time, and it is only so left in cases in which there is excessive drainage—cases which would frequently die without it. Such women should be glad to have a hernia, since it is hernia or death. Of the 85 cases reported, 77 were drained, and eight were not.

After the incision is sutured, the abdominal wall is washed with sublimate solution, and a wet sublimate gauze dressing applied. A layer of cotton is applied over this, and the whole held in position by a Scultetus bandage; the drainage tube is buried in the cotton, and the bandage applied over all. Rubber dam is used about the tube only in cases in which an excessive flow is expected.

During the operation, the patient's legs are wrapped in a blanket, and her underclothing protected by covering with towels. The use of the Kelly pad to drain away all fluid is, also, of the greatest assistance in keeping the clothing dry. After operation, the patient is put in a bed which has not only been warmed with hot water cans, but the cans are allowed to remain, due care being taken to avoid burning the patient.

The after-treatment, in the majority of cases, is simple. Nothing being given for twenty-four hours. One drachm of water every half hour is given the second day; followed by two to four times this amount the third day, along with milk and lime-water, of each one drachm, or two drachms of beef-tea every half hour. These amounts are rapidly increased, and the frequency of administration decreased. On the sixth day, liquid diet, practically *ad libitum*, is allowed, and

about the eighth day, soft diet. The bowels are moved early (especially if there is fever or much pain—most pain after section comes from flatus); preferably by enema, by calomel in broken doses, or by citrate of magnesia solution. As an enema, a combination of magnesia sulphate ℥ ij., glycerin ℥ i, turpentine ℥ ss., and water to make ℥ jv, is employed. This is a very satisfactory formula.

The tube is attended to by myself. It is cleaned two or three times in twenty-four hours, oftener if the drainage is excessive, or if bleeding is going on. Sterilized cotton is seized by the tube forceps and passed down the tube. In this way all fluid is removed. Then a rope of gauze is passed down the tube, and the cotton and bandage reapplied. Each time before cleansing the tube the hands are scrubbed, and if septic cases are being handled, a sublimate bath is used. The tube is removed early (usually on the second day), as soon as the drainage is straw-colored, and does not run up the gauze into the cotton. After removing the provisional stitch, which was placed during the operation, the wound is dusted with a powder containing one part of iodoform to seven of boric acid, and fresh gauze and cotton applied; in general, the wound is not looked at again until the seventh or eighth day, when the deep sutures are taken out and adhesive straps put on. This method of draining I find perfectly satisfactory. I have had but one stitch-hole abscess in over a year.

The catheter is not used if it is possible to avoid it, but if necessary, one of glass is preferred, and taken fresh from sublimate solution; the vestibule is dried with cotton, the catheter smeared with vaselin and inserted; after use it is thoroughly cleaned and returned to the sublimate solution. Catheter cystitis is rare.

Patients are kept on their backs for two weeks. The bed-rest is used after ten days. After two or three weeks they are allowed to get up, and are discharged, in general, after four weeks. I think it is best to keep section cases in bed three weeks; fat women should lie fully three weeks, as they are more liable to have hernia.

In the treatment of complicated cases, shock is met by the use of strychnine and digitalis given hypodermatically, external heat, hot coffee or hot beef tea, and whisky given by enema. I do not like to give more than thirty minims of tincture of digitalis, or one-eighth of a grain of sulphate of strychnine, within six hours. If shock gives way to asthenia, strychnine and digitalis are continued. In twenty-four hours one drachm of tincture of digitalis and one-half to three-fourths of a grain of strychnine are given. For stimulation, enemas of beef tea one pint, whisky two ounces, are used. For rectal alimentation, a combination of one egg in half a pint of milk is employed, the same duly peptonized and one to two ounces of whisky added; this is given every six hours. I have not found that rectal injections relieve thirst.

When fever occurs, every effort is made to move the bowels, enemas, calomel, or magnesia citrate solution being used. I have found the stomachs of those needing purgation too irritable to take Epsom salts or seidlitz powders.

Morphine and opium are rarely used; cases that do well do not need them, and a little encouragement enables the patient to bear the pain for twenty-four hours, after which it is not usually severe. In very excitable women, and in cases where pain has persisted for several days, morphine has been given sparingly; whether this plan is the best in patients who are suffering severely, I am not entirely convinced, nor am I that it is best to withhold morphine altogether in all cases; but I yield to the current of modern practice. I intend to try phenacetin, chloral, and the bromides, for sleeplessness in cases in which the condition of the pulse does not contraindicate depressants.

Patients requiring stimulation usually have an irritable stomach, hence whisky is given by enema, or champagne by the mouth.

Less can be done to combat asthenia by alimentation and medication, after abdominal section than after other operations, because the stomach is not available as a rule. The fate of the patient is decided, in general, when the operation is completed.

Analysis of Cases.—Of the 85 cases operated on, there were of:

Pyo-salpinx—single, 5; double, 6	11
Chronic salpingitis and ovaritis	18
[Of these, 10 were densely adherent.]	
Cinholic ovaries	5
Tubercular peritonitis: cancer of ovaries	5
[Same patient operated on 5 times.]	
Parovarian cysts	2
Ovarian cysts	14
Tubal pregnancy—unruptured, 2; ruptured, 2	4
Retroflexion—hysterorrhaphy	4
Hydro-salpinx	4
Fibroid of uterus (1 myomectomy with removal of one appendage; 3 removal of u. appendages; 1 removal of one appendage)	5
Cæsarean section	1
Bowel adhesions	1
Mixed cases—ovarian tumor complicated by—	
salpingitis 4	
pyo-salpinx 4	
hydro-salpinx] 1	
hæmato-salpinx 2	
—	11
Total	85

Of these sections, 18 were by Dr. Kelly, 7 by Dr. Robb, and 60 by myself. There have been 7 deaths, in my own cases.

Both uterine appendages were removed in sixty cases for ovarian tumors or the various forms of salpingitis or tubal pregnancy.

One uterine appendage was removed in thirteen cases; or really in twelve cases, for in one the other tube and ovary was removed subsequently. This poor woman figures as five cases of tubercular peritonitis and cancer of the ovaries. She will be mentioned later. Of the women who had but one appendage removed, one has had a baby, and a second is pregnant. The first was operated on *in extremis* for a huge acute pyo-salpinx and abscess of the ovary; the other had a myomectomy and removal of one lightly adherent appendage.

In four cases hysterorrhaphy was done.

In one case the operation was to separate bowel adhesions resulting from a previous section—a thoroughly unique case which will be reported in full to the College of Physicians.

There were two exploratory incisions. The first was made to determine the nature of an exudate forming after the removal of the appendages for fibroid of the uterus. It proved to be a cellulitis of the broad ligament caused by an infected pedicle. This case and two similar cases suggest to me that many of the so-called hæmatomas reported by Mr. Tait are cases of infected pedicle. The other exploratory incision was an incomplete operation in the sense that I started to remove a fibroid tumor; but finding an anomaly of the bladder I desisted. The bladder was developed to within one inch of the umbilicus, and there was an absence of the vesico-abdominal pouch of the peritoneum; that is the peritoneum simply covered the posterior wall of the bladder. As the bladder was three inches wide at its upper limit, it would have been necessary to make a lateral incision along the outer border of the rectus muscle. To do a hysterectomy under such circumstances, I felt to be unwise.

Two operations made for the removal of both appendages were incomplete. In the first case there was a chronic salpingitis on the right side and a pyosalpinx and intraperitoneal abscess on the left side. The right appendage and the left tube (pyosalpinx) were removed. The left ovary was imbedded in exudate and could not be felt. This patient is now the picture of health, has gained thirty-five pounds, and menstruates regularly without pain.

The other case was one of defective development of the sexual organs, having in addition hydro- and hæmato-salpinx. On operation the left ovary was not removed because it was apparently imbedded in the broad ligament near the pelvic wall. To have removed it would have required violence to tear it from its bed. As the operation had been prolonged, I did not think it wise to take the time necessary to control free bleeding from a ruptured ovarian artery. This woman has not menstruated; which fact shows the functional condition of the ovary.

One broad ligament cyst was removed from a woman who some years before had had the appendages removed for pyo-salpinx. The exciting cause of the cyst was an infected pedicle.

Two cases were simple section for the evacuation of fluid in a case of tubercular peritonitis with cancer of the ovaries.

The case last referred to deserves special notice. She had had both breasts removed, and the axillas cleaned out, some years ago, for cancer. Five operations were performed

for the primary and secondary growths. While my patient, there were a number of nodules about the thorax, which were quiescent. She had six abdominal sections—one before the time covered by this report. Four times the fluid was removed, and twice in addition one uterine appendage was removed. After each operation, sac filled less rapidly than before. The peritoneum was everywhere studded with miliary bodies supposed to be tubercles. The appendages were supposed to be tubercular, but microscopic examination demonstrated carcinoma. She died eleven days after the last section. The autopsy showed cancer of the stomach, duodenum, and liver. It was noticed at the last section that the tubercular peritonitis was undergoing a cure. The tubercles had disappeared, leaving the peritoneum thick and opaque. At the autopsy it was noted that the tubercles had disappeared in the pelvis and lower abdomen, but that in the upper abdomen they were still abundant. This fact suggests a query, as to whether there is a relation between tubercle and cancer in the abdomen; and again: Were the miliary bodies really tubercular? Vomiting had been constant for nearly two months before the last operation. No pain was complained of, and the vomit was not bloody; it was attributed to the presence of the accumulating fluid. After operation the vomiting continued, everything being rejected. Death occurred from exhaustion on the eleventh day. This death is not included in the seven as a death from abdominal section, as the operation had nothing to do with it.

Deaths.—Three deaths occurred from suppression of urine. In one case, albumen was found in the urine, and chloroform was given. Death after two days. This woman was a "wreck." She had adherent appendages, and an intra-ligamentous ovarian tumor adherent to the right ureter. The ureter was dissected away from the tumor, and dropped. Operation was difficult. Autopsy showed right surgical kidney and left contracted kidney; no peritonitis. In the second case, no albumen was found in the urine. Ether was given. Operation difficult; enucleation of appendages imbedded in exudate. Death resulted on the fifth day from anæmia. Autopsy showed contracted kidneys; no peritonitis. This woman figured in the newspapers as having escaped from the hospital in her gown while delirious. In jumping from a low second-story window, she fractured her olecranon, but otherwise I was unable to find any injury. She had been sick many years. The third case was a "wreck," having been an invalid several years. No albumen was found in the urine. Ether was given. An ovarian and a parovarian tumor were removed—rapid, simple operation. Death after three days from uræmia. Autopsy showed contracted kidneys; no peritonitis.

These cases taught me the necessity of having the urine examined microscopically—even repeatedly in the cases having arterio-capillary fibrosis. With the knowledge of the kidney disease, I would not now operate on such cases as one and two. Women with contracted kidneys will not stand difficult operations. Such a case as three, I would try in every way to improve by nutrition, to assist the kidneys, and then operate under chloroform. One death occurred on the third day from intestinal obstruction. At the autopsy it was found that an organic stricture of the colon existed, which had resulted from a long-standing adhesion of the colon to the broad ligament.

Two deaths occurred from peritonitis. One on the fifth day from septic peritonitis, after the removal of double hydro-salpinx. The drainage tube was used, but it did not empty the pelvis. This death is the only one after operation, in my experience, in which death would not have occurred without operation. The other occurred on the second day after the removal of double pyo-salpinx and a right ovarian tumor. Free irrigation and drainage. Peritonitis developed the first day. The abdomen was again opened and flushed. Death within forty-eight hours. These are the only deaths which have occurred in my practice, except after the gravest operations, or when the patients have been extremely prostrated by acute or chronic disease. Both of these women were feeble.

One death occurred thirty-six hours after operation for ruptured tubal pregnancy. The abdomen was full of blood. Fever shortly developed, and the patient died

within thirty-six hours in hyperpyrexia. This death was attributed to sepsis; but I do not feel clear as to its cause. It may have been due to acute anæmia.

After all, the important question is: What good was accomplished by these operations? It is gratifying to be able to say that the results have been good. I do not know a single patient who is not distinctly better than before operation. Because of the fact that all these patients are not under my care at present, it is not possible to give the exact percentage of those cured, improved, etc. Many become immediately and permanently cured after convalescence from the operation. More are improved after operation, and their cure is delayed six or more months. Some will never be well women, although the operation accomplished all that was expected. The menopause with its nervous manifestations annoys some patients; but in none have serious symptoms been found.

Finally, those patients became well quickly who were operated on early, before the general health and nutrition were impaired. The operation removed all disease. Depending upon the chronicity of the disease and the local complications, and upon the impairment of the general health, the restoration to health has been rapid or slow. The "wrecks" have improved, but none of them are robust women. The question of prompt, early operation for grave pelvic disease, is now the most important one in gynæcology, and results can only improve when the profession becomes convinced of this fact, and women are sent to the gynæcologist while it is yet possible to cure them.

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EXOPHTHALMIC GOITRE WITH MENTAL DISEASE; REPORT OF THREE CASES WITH RARE COMPLICATIONS.

BY DR. CHARLES M. HAY.

In the text-books treating of exophthalmic goitre, and also in the cases reported in medical journals, very little, comparatively, can be found concerning the mental effects of the disease. Beyond mention of "nervousness" in varied manifestations (and by some writers of mental depression) as being commonly present in the beginning of the affection, very little is said concerning more pronounced psychical diseases, which occasionally are found to coëxist. It will, therefore, appear that insanity is rarely associated with this so-called neurosis, or else, that many of the cases which have occurred in patients, previously afflicted with Graves' disease, have not been recorded.

From what is known of the condition, we should, at a glance, expect its victims would yield a *relatively large* proportion of insane. The fact that a certain definite and fairly constant train of mental symptoms nearly always accompanies it in some stage of its course, leads to the natural inference that, in many of the cases, the mind should be expected to give way, and that graver degenerative changes should be inaugurated, from the prolonged over-stimulation of the nervous centers. But, on referring to the works exclusively devoted to insanity, very few cases are found recorded; while, on the other hand, an enormous percentage of cases are complicated by other physical diseases.

Among others, Blandford* refers to the coëxistence of exophthalmic goitre and insanity, mentioning a case in which, however, *pregnancy* immediately preceded the development of the psychosis. Savage reports† three cases (all in young women), all having had acute mania, with a prodromic period of depression; and further states, a marked predisposition to insanity, by reason of heredity, existed in all. The testimony of Gowers is, that mania is the most common form of mental trouble that occurs with Graves' disease, and an excellent illustration of such a case, which terminated fatally, is given in his book. Emminghaus‡ found mania and melancholia respectively in ten cases. Others might be cited, but the experience of men of large clinical opportunities seems to be of much the same nature, viz., that the condition is rarely met with; and many of the distinguished writers do not refer at all to it being associated with fully developed insanity. Savage (quoted by Gowers) states that any form of insanity may complicate this neurosis, including mania simple and re-

* Insanity and Its Treatment; 3d Ed.
† Guy's Hospital Reports, xli. 31.
‡ Allgemline Psychopathologie, p. 371.

current, melancholia acute or chronic, and even the general paralysis of the insane.

The frequency with which exophthalmic goitre is complicated by many other systemic diseases is amply indicated in its literature. It is complicated by paralysis, myxœdema, epilepsy, hysteria, hystero-epilepsy, chorea, various forms of tremor, hemi-anæsthesias including frequently the special senses, local or general sweatings, migraine, neuralgia, diabetes, Addison's disease, lymphadenoma, enlarged trachial or bronchial glands, and other conditions which my own cases will illustrate; various paræsthesiæ have also been recorded. Gowers believes that hysteria is mainly responsible for the hemiplegia which at times complicates it. Gowers and Begbie have both noted intermittent albuminuria, and abundant pale urine before a paroxysm of palpitation and dyspnœa.

Somnambulism was a feature in a case of Dr. Samuel West's,* and he estimates the relative frequency of exophthalmic goitre in England, as one in every thousand of outpatients. The conditions which more frequently accompany exophthalmic goitre are seven—colliquative diarrhœa, respiratory disorders, sudden paroxysms of vomiting, albuminuria, organic disease of the heart with a history generally of antecedent rheumatism, anæmia, chlorosis, and emaciation. How far these affections are purely collaterals, and to what degree they may be connected causally with the disease itself, is at present mere speculation; that it is more than probable a study of allied conditions may at last lead to a better knowledge of the essential lesion producing the three cardinal symptoms which usually are present.

If we go still further back and study the causes which have been given in the cases recorded by skillful observers, we will find them very indefinite, and only those which commonly produce many other, and more common, neuroses. Thus, among causes more usually given are *depressive*, *emotional*, and *mental states*, while anæmia is reckoned a most powerful cause by most writers. In another large class of cases no cause can be assigned; Cheadle and Oesteneicher have noted a family tendency to this disease, the former recording an aunt and two neices affected, the latter eight children of a family of ten. Rheumatic fever, pneumonia, acute contagious diseases, traumatism applied to upper portions of the body, acute alcoholism, diarrhœa, and cold, are also regarded as possible by Bristowe.* The fact that females are so much more liable, has led some to seek a cause in diseases of the reproductive organs, but no constant lesion of that system has been found to exist. Gowers affirms that five females are affected to one male, but the experiences of others would seem to indicate this estimate as too low. Of fifty-one cases observed by West,† and of thirty cases reported by Mr. Hill Griffith, three only of each series were males. In this country, Austin Flint‡ states there was only one male case out of twenty observed by him; and from reading the reported American cases I am led to believe that, in this country at least, the disease attacks females in preference to males, in a ratio exceeding five to one; many prominent clinicians admit having never seen a male case. With the exception of sex, therefore, the causes commonly assigned are those likewise common to all nervous diseases, and in no wise specific; consequently a study of them alone cannot at present afford material aid.

All observers have, however, noted that Graves' disease is often associated with other neurotic troubles, and in a case reported by Rockwell,§ the successive occurrence of several neurotic states in the same subject is so interesting, that I quote as follows:

Chorea existed until the fourteenth year, then irregular and painful menstruation continued until the eighteenth year and stopped, and for several years following hystero-epileptoid seizures afflicted the patient. At twenty-one the monthlies again appeared and she improved, but at the twenty-fourth year exophthalmic goitre developed.

In another case, also reported from the same source, the disease followed child-birth.

In this connection I may mention having seen hereditary chorea complicated by exophthalmic goitre. In this case the exoph-

* Proceedings Lond. Oph. Soc., 1886.

* Trans. Lond. Oph. Soc., 1886, p. 46.
† Lancet, London, 1886, p. 925.
‡ Pepper's System of Med.
§ Medical Record, Vol. XVIII, p. 285,

thalmus and cardiac symptoms were marked, while the thyroid gland was only moderately enlarged. More recently I saw a second case in a female of advanced years who likewise presented the triad symptom-group we call Graves' disease. This case I hope to report more fully later.

The pathology of exophthalmic goitre throws little light upon its connection with mental disease, and if any such direct relation exists, it still awaits discovery. There are apparently two classes of lesions which have been found in this affection, viz.: (1) Central and; (2) peripheral lesions; with a third class in which no lesions of the nervous system were discovered *post mortem*. For example: Morell Mackenzie found softening of the corpora quadragemini and the medulla oblongata, with cardiac valve lesions, dilated thyroid vessels, and an increased amount of fat in the orbits. The cervical sympathetic has been found diseased by Recklinghausen,* Trousseau,† Archibold,‡ Eulenburg,§ Guttman,‖ and Woods,¶ and many others.

On the other hand, many neurologists and pathologists favor the view of a central lesion, which seems to more readily explain the bi-lateral nature of the symptoms presented in nearly all cases. In one of Dr. Savage's cases of acute mania following exophthalmic goitre, the cervical sympathetic was found normal, and the brain only presented the *post mortem* appearances usually found in acute mania; in another there was disease of the supra-renal capsules. Owing to this fact, that quite frequently no demonstrable lesion of the brain or nerves is found, some are inclined to the belief that the disease is a reflex neurosis, at least in some cases. Prof. Hack, of Freiburg, thinks this may be so, since he succeeded in curing a case by the removal, with the cautery, of a nasal hypertrophy.**

That both the physical and mental symptoms can be greatly aggravated by apparently very slight causes of peripheral irritation, is shown in one of my own cases, in which the breaking of a tooth at dinner caused a marked exacerbation of all symptoms. A case in which no lesion of the nervous system was found, but in which there was marked fatty degeneration of the muscular fibres everywhere, is reported by Dr. Silcock.* Among others who have found disease of the sympathetic nerve ganglia, Knight,† Reith,‡ and Arnozan,§ may be mentioned. The last named found degeneration of the cervical sympathetic in eight cases, while in four other cases he failed to find it. Among those who have died insane, I have failed to find any *post mortem* evidence which could establish a connection between any of those lesions of brain or nerves commonly found in exophthalmic goitre, and the subsequent invasion of grave forms of mental disease. In reviewing the pathological anatomy of Graves' disease, then, one is forced to the conclusion that either there has been faulty observation in some of the cases, or that the disease is not due to a *constant* lesion. Thus we have reported lesions of medulla and pons, of the cervical cord, and of the sympathetic nerve, besides a multitude of grave lesions of other systems of the body. It would appear therefore that exophthalmic goitre practically is found to exist with vary variously-placed lesions of the nerve centres, and that at present it is impossible, from the standpoint of anatomy, physiology, or pathology, to adequately explain the production of the symptoms.

The following three cases are detailed to show that grave mental disorder does occur occasionally as a sequence of this neuropathic malady, and particular attention will be given to the description of several very interesting conditions which complicated; these were, deep pigmentation of the skin, boulimia with pica, symmetrical gangrene (Raynaud's disease), albuminuria, angio-neurotic œdema, sudden pleural effusion, and the paraldehyd habit. It is somewhat curious

* Deutsche Klinik., 1863.
† Trousseau and Peter, Gaz. Hebdom., 1864.
‡ Med. Times and Gaz., 1865.
§ Arch. f. Psyche. uud Nervenkrankheit, I, 1868, p. 430.
‖ Brit. Med. Journ., 1882, p. 35.
¶ The Influence of the Sympathetic on Disease, London, 1865.
** N. Y. Med. Record, August 21st, 1886.

* London Lancet, 1886, p. 925.
† Boston Med. and Surg. Jour., April 19th, 1868.
‡ Med. Times and Gaz., November 11th, 1865.
§ Quoted by Hamilton, "Nervous Diseases."

that these three should have come under observation at about the same time, since I searched the records of the Institution in which I saw them,* and not a single case was noted as being the subject of Graves' disease, and the careful records of that hospital hardly leaves room for doubt of accuracy.

In the first, while it is probable melancholia followed the developments of Graves' disease, still it cannot be definitely settled whether or not her first attack was attended by exophthalmic goitre. In the last two cases the history is clear, and definitely proves the prior development of goitre. The type of the mental symptoms may also be worthy of note, since in all they were essentially the same, and although resembling ordinary melancholia closely, still present certain marked differences.

Case I.—Mrs. S. Mother was of nervous diathesis; an only sister had acute melancholia at the age of sixty-five, from which she made a fairly good recovery, being able to resume ordinary duties, though a melancholic tinge remained until death. A daughter of this sister was of erratic nervous temperament, and numerous other eccentric individuals figure in the family history. None ever suffered from exophthalmic goitre, however.

There was nothing unusual in her life until her marriage. Then domestic infelicity resulted in a divorce suit. For twenty-five years prior to her first admission she was troubled with chronic diarrhœa of mild character, and it was noted she possessed a remarkable idiosyncrasy towards opium in any form, the smallest dose making her seriously ill. She was a diligent reader, and accomplished much literary work; was mild, gentle, and refined in manner, yet self-reliant in thought. She lived under excellent hygienic conditions, and was naturally religious, spending much time on various commentaries. No severe remote illness existed, other than chronic diarrhœa. In December, 1885, she was admitted at the Morris Plains Asylum with acute melancholia, and was discharged in three months "nearly well." Her friends, however, noticed she was not as well as before, but she continued to discharge her ordinary duties, family and social, until April 16th, 1889, when she was again admitted. She was then sixty-one years old, and her condition was noted as follows:

"Large-sized female wrist; rather intellectual face; muscles generally fleshy and soft; digestion much impaired; had a history of acute melancholia with delusions; was talkative, and kept expressing fears of her safety, that she was 'lost forever,' and 'had committed the undpardonable sin.'"

Physical examination revealed marked exophthalmus, a greatly enlarged thyroid gland, over which, thrill, hæmic murmur, and an impulse, were markedly present, while the pulse ranged from 130 to 150. The pulse was decidedly weak, intermitted five or six times per minute, small, irritative, and the artery was somewhat thickened; soft hæmic murmurs audible at all the valve areas. The cardiac dullness was not increased, and the sounds, though indistinct and blurred by the hæmic murmurs, still could be heard. The apex beat was a little diffused, but was felt to be most forcible in fifth interspace, one and a half inches inside the nipple-line. The right lobe of the thyroid gland appeared larger than the left. Talking or any form of excitement immediately increased the symptoms, and at times considerable dyspnœa existed. The chest movements were irregular and slight, expansion being much impaired. Auscultation revealed no disease of the lungs. No ocular symptoms present, excepting well-marked arcus senilis. The only abdominal symptoms were dyspepsia and history of prolonged chronic diarrhœa, as has been stated.

Under treatment, her diarrhœa was completely relieved, and for two months improvement was generally uninterrupted, while, with the betterment in her physical condition, her delusions entirely disappeared. Then a sudden relapse, without any apparent cause, occurred. Painful delusions came back, and the condition of exophthalmus became exaggerated. She fancied herself "dead all over" except the large thyroid gland, which she declared was "alive," and constantly grasped with one or other hand. She frequently implored me to have her buried, since she was "undoubtedly dead." Hundreds of like painful delusions came and went, and for a time no further symptoms developed. Then brief attacks of mania occurred, and after them lucid intervals of an hour's duration frequently happened. During these, she frequently appreciated her condition. Memory was still retained. Finally, three months prior to death, the signs of dementia appeared suddenly, and ran a rapidly fatal course. The dementia, in a few weeks, became almost absolute, and I have never witnessed more rapid mental degeneration than here occurred. It was remarkable in

* Morris Plains Asylum.

that, while every other faculty was completely paralyzed, memory was retained to a degree most surprising. Thus, a curious picture was presented: A woman much emaciated, with filthy habits, and a face from which all lines of expression were gone, would, under questioning, stop for a moment a horrible automatic sucking of the lips, and intelligently converse about the fancies of Swendenborg, or the system of Descartes, with her face all the while absolutely expressionless. The urine contained no albumen, casts, or unusual microscopic appearance. Towards the end, the thyroid became smaller, and the arterial excitement less. She died of exhaustion, apparently, April 15th, 1890. On several occasions, an acute acne of upper part of body occurred. *Post-mortem* was overruled by friends.

Case II.—Miss M., single; aged 66 years; no neurotic family taint discoverable. Liberally educated and of good habits; suffered much worry over domestic affairs. On admission in latter part of 1889, the following history was obtained: Had been prone to simple melancholia for three years, during which her eyes had become prominent and she had suffered much from shortness of breath and palpitation of the heart, with a sense of choking in the neck. A few months prior to admission, had been taking paraldehyd freely for the relief of her nervousness and insomnia, which nevertheless persisted; at the time of admission, was taking regularly four to five drachms daily in divided doses, and was only quiet and at all comfortable when under its influence.

Physical examination showed the patient to be above average height, very thin, skin darkly pigmented generally, the face and neck especially dark. Very marked bulging of the eye-balls; considerable thyroid enlargement, with no perceptible difference between the two sides, and very rapid and excited cardiac action. The pulse was over 150 per minute, and weak. No murmurs could be distinguished over præcordia. The respiration was usually 25 per minute; the chest movements seemed labored and slight, expansion being particularly poor. No lung disease found upon auscultation.

Every effort was made during the next few months to substitute for paraldehyd some other drug, and bromides, chloral, cocaine, cannabis Indica, and opium, vainly tried. On stopping paraldehyd for over twelve hours, serious symptoms always developed; these were, excessive cardiac weakness, marked general tremor, and sometimes syncopal attacks, with relaxation of the skin; while her screams for the medicine were piteous to hear, and only paraldehyd would quiet her. Repeated experiences of this kind, in several of which the woman went into collapse, in which stimulants had to be actively pushed, convinced me it was useless to attempt to break the habit, and the drug was accordingly given, of necessity, in increasing doses, until at the time of her death she was taking fourteen drachms daily. The patient continued in this extremely painful condition until July 7th, 1890, when at 3 P.M. slight fever was noted, and a half-hour later a hemi-convulsion of the right side occurred, with noisy breathing, jerking of the head to the right shoulder, and brief complete unconsciousness. When I saw her, ten minutes later, the left pupil was slightly smaller than the right, which seemed dilated, and she was perfectly conscious, with partial blindness of both eyes, and absence of color sense. No motor paralysis remained. The special senses were intact except sight. Intellection was confused. At 9.30 P.M. the temperature had risen to 105° F., and she had a similar convulsive attack, followed by a third fifteen minutes later, after which she was mildly delirious, and there was pharyngeal and laryngeal paralysis. At 11.45 coma developed, and respiration became more stertorious at 30 per minute. The lungs remained clear. In two hours she regained consciousness, and in a few minutes another convulsion similar to the first. Remained partially conscious during remainder of the night, and at 9 A.M. of the day following she recognized me, and, by gesture chiefly, asked for paraldehyd, which was given. Temperature was then 103.5° F.; pulse 130; respiration 27, shallow and irregular; pupils slightly but evenly dilated. At 2 P.M. temperature had risen to 105.4° F., and she died at 5.30 P.M. with persistent hyperæmia. During all the convulsions, both eye-balls deviated upwards and to the left side.

The last case is particularly interesting from the fact that the combination of symptoms presented appear to be very rare, if not unique, and illustrates a possible relation between various angio-neuropathic diseases.

Case III.—Miss B., aged 43, single. Admitted January, 1889. Occupation, a school-teacher; family history excellent, giving no evidence of hereditary vice, or any circumstance apparently bearing upon the case. Has always been of nervous organization, and family reverses made it necessary for her to teach school and care for an aged relative, which subjected her to constant mental strain and considerable worry. She however continued in fairly good health

until three years before admission, when she noticed a swelling in the neck, was short of breath, and was soon informed by her physician that she had exophthalmic goitre. Treatment proved unavailing, since she was forced to continue her work. One month before admission she fell into acute melancholia, which was attributed directly to the breaking of a favorite tooth at dinner. She grew rapidly worse; worried incessantly; expressed fears that starvation would end her troubles, and for weeks ate scarcely anything willingly. Insomnia developed and continued, and she became much emaciated, while the triad neurosis became very pronounced.

On admission, January 30th, 1889, her condition was as follows: Patient of medium height, skin very dark generally, and of an ashy hue; extremely thin and weak, staggering as she walked. Her eyes protruded very much, and the lids could not meet over the eyeball, unless pressure was first made. There was a characteristic want of coördination between the lids and the eyeballs; no defect of vision. The thyroid was much enlarged, pulsated violently under the fingers, and auscultation revealed resonant blood murmurs over it; the right lobe larger than the left. Upon closer inspection the carotids, subclavians, trachials, temporals, and even digital arteries, were found to be pulsating visibly. By friction of a small portion of the hand, or more clearly, by holding up one finger and making gentle pressure so as to partially empty the matrix of the nail of blood, visible pulsation in the capillaries was noted. The heart was not enlarged, but the second sound was weak, and hæmic murmurs were heard anywhere over præcordia. The pulse in the wrist ranged from 140 to 160, and the rate changed very frequently without any apparent cause. She was excessively nervous; the reflexes a little exaggerated; she replied to questions fearfully and expressed various delusions respecting her personal safety. At this period it was an insanity of doubt and fear. For several days previous she had refused all food, believing it poisoned; her bowels had been irregular, alternating between diarrhœa and constipation.

Examination of chest revealed symmetrical deficiency in the movements during respiration. The chest was unusually long and narrow, and seemed fixed in almost complete expiration, the breathing being almost wholly costo-abdominal. There was very marked supra-sternal pulsation, with a diffuse epigastric and abdominal wave at each systole.

Upon auscultation the respiratory murmur was feeble, and a few moist râles were heard over right upper lobe. No dullness anywhere. Examination of urine: Reaction, acid; sp. gr. 1.020; a moderate amount of albumen; no sugar; no tube-casts or unusual sediment.

Case III—Exophthalmic Goitre with Dementia.

With a treatment of absolute rest, general tonics and careful diet, she gained a little. Frequently, however, she would spring from bed in an agony of fear, and sulphonal and chloral in small doses were used with good effect. In a week she utterly refused all food, and for two months had to be fed by a nasal tube. Short periods of violent mania occurred, but commonly she only suffered from delusions that she "was being burned up;" "this was not her body;" or she had been "dead for some time;" and many similar painful ideas. Meanwhile the temperature was constantly subnormal, broken by sudden unexplainable ascents to 103° F., and once to 104° F.

On Feb. 20th, 1889, a swelling appeared upon the dorsal surface of the right foot, and in a few hours was very large, whitish with a dusky hue, pitting deeply on pressure. By the following day it had nearly disappeared, but the inner surface of the right leg presented the same kind of œdematous swelling, which, disappearing below, next affected the thigh

upon its inner aspect, and then appeared upon the lower segment of the abdomen, and down the inner side of the left thigh as far as the knee, below which it did not extend. During the next two weeks these swellings frequently appeared, always suddenly and without a rise of temperature or any systemic disturbance. They did not always come in the order observed at first—one morning a large swelling would be observed upon the lower portion of the abdomen, and the right foot might next be the seat. They were entirely painless, and consisted primarily of intense local hyperæmia, with subsequent effusion and swelling of the tissues affected.

On March 4th, 1889, there was sudden dyspnœa, and, on examination, marked dullness over the left base with a rise in temperature to 103.4° F., and the other signs of acute pneumonia; except these there was no pain, or rusty sputa, and a very slight cough. For four days there was an *inverted* temperature chart, the morning mean being three degrees higher than the evening average temperature. On the third day examination gave flatness to 4th rib, when the previous evening no signs of pleural effusion were present. On the fifth day the temperature *righted* itself. On the seventh day the effusion was much less, and on the tenth day the fever had disappeared, and only slight dullness remained at left base, the respiratory murmur having returned almost to the normal, except a slight bronchial character. In another week all dullness had completely gone, and the respiratory sounds were practically normal.

After this illness she began to eat, and gained strength, while the temperature still remained decidedly sub-normal; and, I may add, this persisted constantly in the case. Sudden paroxysms of vomiting or diarrhœa were of frequent occurrence at this time.

On April 8th, 1889, she complained of violent pain, radiating on both sides from the lumbar spine to the symphysis of the pubes, and the skin along the lines of radiation became mottled and dark-bluish in color; then whitish spots appeared, and upon the dark pigmented skin these changes were strikingly apparent. On the following day blebs formed over several of these on both sides, the largest the size of a fifty-cent piece, being situated near the trochanters. Warmth was applied in the form of flaxseed meal poultices. This eased the pain, but superficial sloughs were visible the next day. These spots appeared to be most severe as they approached the spine behind, and several of them became gangrenous. No other parts were affected. The resultant ulcers were two months in healing. During June she was not able to get up, her mind more rapidly gave way, and a deepening dementia, which did not include the memory, occurred, more slowly, however, than in the first case. The painful delusions slowly faded, but no change was noticed in her condition physically.

On Feb. 26th, 1890, the following note was made:

"Symptoms of exophthalmic goitre still extremely well marked. Recognizes friends, and memory is fairly good. Is very much emaciated. There is constant grinding of the teeth while she remains awake. The skin has an added cachetic appearance. Enormous appetite, with pica present. Face horribly distorted and expressionless. Pulse commonly 120 per minute. Sometimes seems afraid of her attendants. Is filthy in habits."

March 27th, 1890. Severe pain in both feet, radiating to the knees; the skin of toes and feet bluish-white and cold. A darker patch below each external malleolus, between it and the point of the heel, soon became a little œdematous, or "baggy," to the touch. Electricity and warmth relieved pain, and by the following morning, with the exception of the patches named, the limbs were normal. These areas, below each external malleolus, were covered by blebs filled by dark bloody fluid. The cuticle soon entirely separated over a space the size of two silver dollars, and the skin beneath was superficially gangrenous. Extensive sloughing occurred, but the ulcers finally healed. This attack was precisely similar to the one in which the back and lower abdomen were affected. Since then, up to the present, there has been progressive dementia; the thyroid is possibly a little smaller, and the eyes are less prominent. The woman is a mere skeleton, but walks about freely, and seems stronger than at the time of her admission. On several occasions, pain in the lower extremities has been accompanied by whitish spots, and at times dark cyanotic patches the size of a silver dollar, but they have always disappeared under treatment, without any further gangrene. Her cough has ceased. She still has deficient chest movements. The urine is still albuminous, moderately, although on several occasions I failed to find it. No tube-casts can be found in her urine.

I have reported these three cases at length, because they are certainly rare, and the last, particularly, combines the symptoms of so many angio-neurotic conditions, that I

have endeavored to give as full an account of her as is possible from my notes.

I regret that *post-mortem* examinations could not be obtained in the first two cases. It may be especially noted that memory in all three cases remained intact, while all other mental functions suffered more or less severely. These cases, as illustrating extreme effects of Graves' disease, serve as a lesson to the effect that, if neglected, such cases may become insane, or the subjects of other grave diseases dependent upon the alterations in the blood-vessel system. Since a certain proportion of cases of exophthalmic goitre finally become insane, the indication is to place around all those so afflicted, the same prophylactic precautions which are necessary in cases having a hereditary predisposition to insanity.

Cases I and II are of interest, from the fact that both were affected late in life. Case III is interesting, because it illustrates that over-mental strain or worry, Graves' disease, insanity, sudden œdema and effusions, pigmentation of the skin, symmetrical gangrene, and finally dementia itself, with a singular escape of the memory-sense, may be successive pathological conditions occurring in the same individual, and more or less dependent upon each other.

1843 North Eleventh Street,
Philadelphia, Pa.

BORO-GLYCERID AS AN ANTISEPTIC.

BY W. THORNTON PARKER, M. D.

Esmark demonstrated the first and most important principle in the treatment of wounds is, "to keep at a distance all injurious influences which hinder or retard their healing;" and it was the accomplishment of this principle which gave birth to Listerism, introduced carbolic acid in the treatment of wounds, and revolutionized surgery. The good work went forward, until at last, in became a wild extravagance, when the dangers of carbolic acid were only too frequently demonstrated. Then reaction set in, and new and better antiseptics were sought on every side. Among the substitutes proposed were, iodoform, eucalyptus, bismuth sub-nitrate, mercuric chloride, borax, boracic acid, and various other more or less useful preparations.

In the treatment of wounds, borax has been employed in greater or less degree from the earliest times. Pliny refers to its healing qualities, and describes its use, under the name of "*chrysocolla*," and almost every work on surgery since has acknowledged its value. In recent years it has been recommended as an antiseptic in the treatment of wounds, sores, burns, etc.

Boracic acid and borax are neither very readily soluble in water or alcohol, but Prof. Barff, of London, discovered solubility could be enhanced by a combination of the two with glycerin.

In 1882, after having witnessed the unsatisfactory dressings of carbolic acid and iodoform in Continental hospitals, I had the pleasure of seeing boro-glycerid in use at the Charing Cross Hospital, London. Twelve years before I had followed the clinics of Lister, and shared in the general enthusiasm for carbolic acid, hence, after experiencing the discouragement and revulsion which came to so many, I was less ready to believe the new antiseptic was anything more than a temporary favorite; but soon I discovered, however, that in the wards of Charing Cross Hospital, the worst cases were placed under boro-glycerid, and the best given over to iodoform and carbolic acid treatment; and the comparison of the condition of the wounds under these antiseptics left no doubt as to which was the most reliable and best. Under the boro-glyecrid dressings, wounds quickly presented a healthy and natural appearance, and the absence of the objectionable features that invariably attend the employment of other antiseptics, and the comfortable condition of the patients, were very obvious; and this same has been abundantly verified since by personal experience.

Boro-glycerid forms a definite hydrate with a large quantity of boiling water, and is not decomposed when diluted in the proportion useful in surgery, viz., one part to twenty or thirty parts of water. Such solution is inodorous, has a slight saline taste, is quite unirritating to wounded surfaces, and under its use—if scientifically prepared—satisfactory results will be obtained, all kinds of wounds healing rapidly; it is en-

tirely inoccuous when applied to a wounded surface, and does not irritate when kept constantly applied. Since its valuable properties have been known many have attempted its manufacture with varying degrees of success; its apparently simple formula has deluded numerous pharmacists, partly because of the belief it can be easily and quickly made, and because ordinary and inferior ingredients are employed, when only the purest are admissable; hence scores of worthless compounds are being sold as boro-glycerid. We can thus account for much of the disappointment resulting from its use—a prominent house in New York recently sent me a preparation of their own manufacture, which on trial proved to be absolutely worthless. Surgeons using inferior compounds have failed to secure good results for these reasons, and it is not at all to be wondered at, that failing once or twice, they have condemned and abandoned it as an antiseptic. However, boro-glycerid is gaining in popular favor, and, I believe, the time will speedily arrive when its superior merits will be fully recognized, and a discrimination made which can only be brought about by experience and care in its selection.

The great difficulty to contend with is, the sale by unprincipled manufacturers and druggists, of a spurious article, which as before intimated, is simply a mechanical mixture of glycerin and borate of soda; in most the boracic acid is wholly omitted. Again, experience has taught that no two manufacturers of boracic acid offer precisely the same quality or grade, the majority being decidedly caustic, owing to the impurities incident to cheap manufacture; such have a tendency to a dark color, and are more or less irritable when employed. Parke, Davis & Co., of Detroit, however, manufacture not only a perfectly reliable, but most superior preparation of uniform strength; and it is to their faithful and continued interest in boro-glycerid that such gratifying results are obtained from its use. Manifestly it is impossible to manufacture successfully, unless provided with complete machinery and apparatus for testing and mixing, such as are found only in large manufacturing houses. To be sure, almost any chemist will claim he "can make as well as any one," but experience has taught that with the irregular preparations the antiseptic properties are wanting, and disappointment the inevitable result.

Beside the value of boro-glycerid in general surgical dressings, I would call attention to its extended usefulness as a local application in other diseased conditions. For many years I have used a solution in gynæcological practice—as an injection for leucorrhœa, vaginitis, etc.; also in the form of suppositories or tablets made with gelatin, it is an excellent application to ulcerated and diseased cervix uteri; or it may be spread as a thick glycerol over the diseased tissue. The gentleness and cleanliness of the remedy, and the steady improvement resulting from its use, are most gratifying to patients and physicians alike.

As an injection in the puerperal state, either alone or in combination with carbolic acid, boro-glycerid is excellent; aud I have no hesitancy in recommending its use for intra-uterine application when desirable.

In diseases of the eye, too, it has been used with more or less success in England, on the Continent, and also in the United States.

In the treatment of otorrhœa, nothing can be better; in cases of long standing, rapid improvement follows; the injection, however, should be followed by careful use of absorbent cotton, and then Dr. Green's method of insufflation of boracic acid practiced.

In chronic eczema of the scalp, no remedy, in my experience, can at all equal boro-glycerid; I have had success with every case so treated. It is useful, too, in many other forms of skin diseases, including chaffed skin, chapped hands, burns and scalds; and invaluable as a dressing for wounds and in the treatment of boils and carbuncles. Since the development of antiseptic surgery, no preparation has been discovered which combines so many valuable properties, and which can be relied upon in so many emergencies. Experience has convinced me of its remarkable excellence, and as such it gives me great pleasure to recommend it, and to witness the increasing confidence of the medical profession in its usefulness.

Salem, Mass.

Correspondence.

THE USE OF HÆMOGLOBIN COMPOUND AND OLEATE OF QUININE IN TYPHOID FEVER.

I have recently been treating a case of typhoid fever in a child five years old, and employed hæmoglobin compound in place of beef tea; and oleate of quinine in rectal gelatin capsules as an antipyretic. The results have been so favorable that a report thereof may be justly added to the literature of these preparations.

It is not necessary to lay stress on the advantage of fluid diet in the treatment of typhoid, as its importance is appreciated by every physician. Milk and lime-water are generally used to a greater or less extent in the treatment of such cases, but there is often a limit to the employment of the former, and below the amount necessary to keep up the proper nutrition of the patient, when other food must be used for supplementary alimentation. Hæmoglobin compound, would seem to be particularly indicated in this class of cases. The case in which I used it recently illustrates this, as before the compound was added to the dietary, wasting was rapid in spite of milk, beef tea, etc., and strength going fast. As soon as it was added, wasting checked, and there seemed to be no further loss of strength; furthermore, all of the other symptoms improved in a way that was marked, and could only be accounted for by the sustaining effect of the compound. I have been using from one and a half to two teaspoonsful in water every four hours, half way between each dose giving three ounces of milk and an ounce of lime-water.

In 1879 I had occasion to call the attention of the profession to the use of oleate of quinine in rectal capsules. The capsules consist of gelatin shells with conical caps, used as suppositories. The medicating ingredients are inserted in the lower portion, the upper margin is then moistened with water, and the cap inserted; before introducing into the bowel, they should be wet with sufficient water to enable them to slip in easily.

Oleate of quinine may be prepared as follows: Quinine (U. S. P., 1880), dried at 100° C., until it ceases to lose weight, 25 parts; oleic acid, 75 parts. Triturate quinine with the oleic acid, gradually added, apply gentle heat, and stir frequently until quinine is dissolved. The product contains 25 per cent. of dry quinine.

When the official quinine ($C_{20}H_{24}N_2O_2 \cdot 3H_2O$) is not available, the quantity corresponding to 25 parts of dry quinine may be prepared as follows: Take 34 parts of official sulphate of quinine, dissolve it in 200 parts of water with the aid of a sufficient quantity of diluted sulphuric acid, precipitate quinine by means of water of ammonia, added (under constant stirring) until it is in slight excess. Transfer the magma to a close muslin strainer, previously wetted, allow the liquid to drain off, and wash the precipitate with ice-cold water, until the washings are practically tasteless, but using not more than about 200 parts of water; finally, dry the precipitate. The theoretical quantity of dry quinine obtainable from 34 parts of the sulphate, is 25.27 parts. In practice, approximately 25 parts will be obtained.

The capsule will contain enough of the oleate to represent about one grain of quinine. I generally use, in children, two to three capsules, during the remission of the fever, with most excellent results.

F. E. Stewart, M. D.

Wilmington, Del.

PYOKTANIN IN TONSILLITIS.

For several years past I have been subject to severe attacks of tonsillitis and have tried every remedy that I have seen recommended for its relief. The attacks would always last five or six days, no matter what I used.

A few weeks ago I was taken with as severe an attack of tonsillitis as I have ever had. I started with the usual treatment, but at the end of twenty-four hours my tonsils were swollen to such an extent that they met in the median line; breathing was difficult and painful, and swallowing almost impossible.

Thinking of a solution of pyoktanin (gr. ij to ℥ j) with which I had been injecting an epithelioma for one of my patients, I decided to try that for tonsillitis.

Taking a hypodermatic syringe with a long needle, I injected half a drachm of the solution into each tonsil. It was not very painful. In an hour's time I felt a little better, and noticed the swelling was subsiding. Ten hours later I was much better, but as the tonsils were still somewhat swollen I injected them again, using half the amount of solution that I did at first.

I have had no cases of tonsillitis since, but I shall certainly use it in the first case that I have, as I have found more and quicker relief from it than from anything that I have yet tried.

W. C. Gates, M. D.

Rockland, Mich.

The Medical Age.

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Editorial.

DOCTOR FORDYCE BARKER.

The death of Dr. Fordyce Barker takes from the medical profession one of the best known, most esteemed, and most loved of its members. No one who has met Dr. Barker but can recall the dignity of his presence, the kindness and courtesy of his manner.

His contributions to the literature of that branch of medical practice he devoted himself to, will long perpetuate his memory. They are classics born of an extensive and ripe experience, and an exceptionally brilliant faculty of observation, crystallized into gems which have made his teaching and writings so popular and helpful.

Dr. Barker held an advanced position in his profession, and had been looked up to, on subjects connected with his special lines of practice, for many years by younger practitioners. He was conservative in thought, deep-rooted in his opinions, but withal a helpful friend to aspiring young men of the profession. While tenacious in this respect for estabished principles, he has for years been actively identified with the various Societies of New York which have done so much toward the scientific investigation of subjects connected with medicine and medico-ethics. He was a member of the New York County Medical Society, the New York Obstetrical Society, the New York Pathological Society, the New York Medical and Surgical Society, the Medical Society of the State of New York, the American Gynæcological Society, and many other American organizations of a similar kind. He was Honorary Fellow of the Royal Medical Society of Athens, and member of the Obstetrical Societies of Edinburgh, London, Philadelphia and Louisville, and of the Philadelphia College of Physicians.

He was member of the Faculty of the New York Medical College, was Professor of Clinical Midwifery and Diseases of Women at the Bellevue Hospital Medical College, and consulting physician of the Nursery and Child's Hospital, St. Elizabeth's Hospital, the Cancer Hospital, and surgeon to the Woman's Hospital. He was extensively quoted as an authority in this and foreign countries, and several of his articles were translated into the Italian, French, Spanish, and German languages.

Dr. Barker was seventy-three years of age at the time of his death. He was born at Wilton, Me., on May 2d, 1818. He was educated at Bowdoin College, where he was graduated in 1837. Eight years later, while still a young man, he was made Professor of Midwifery at his *alma mater*, a position which he held until his removal to New York. He studied medicine in Boston under Dr. H. I. Bowditch and at the Chelsea Hospital, and later in Edinburgh and Paris, where he was graduated in 1841. He was a loveable man, and had hosts of friends. His practice was the envy of many a New York physician of prominence. He was one of Gen. Grant's attending physicians, and he numbered among his patients William B. Astor, the late John Jacob Astor, and many other members of leading New York families. His cheery, satisfying manner carried a ray of sunshine into the sick-room, and half of his success was due to his kindly nature and manner.

He was a royal entertainer, and received many guests at his New York home, among them many people of prominence in Europe. Both Dickens and Thackeray accepted the hospitality of his home here, and the Doctor was a guest in the latter's London home. Of late years he had been in the habit of taking regular summer trips to Europe, and was well known in London and Paris.

The direct cause of death, as given by Dr. A. A. Smith, his associate and attending physician, was an apoplectic stroke.

THE DANGERS OF HEALTH RESORTS.

As the season approaches when it is the custom of a large proportion of the well-to-do *clientelle* of physicians living in cities to

betake themselves to summer resorts, it behooves the family doctor to advise as to the necessity of investigating the sanitary conditions of the place selected for the summer.

Some very sound and pertinent advice on this subject, designed for invalids, but applying to those in health as well, is presented in a recent article in the New York Medical Journal.

In the selection of a health resort, great caution should be exercised. The physician, if consulted, should know thoroughly, and if possible by personal examination, the climatological factors which enter into the problem. He must consider the altitude, the relative humidity, and the average temperature of the region he recommends, and must also understand the nature of its prevailing winds, the daily extremes and suddenness of changes of temperature, the contiguity of water and forest, and the comparative number of clear and cloudy or rainy days. It is well, too, if he is familiar with its flora. But even if the well-trained physician is conversant with each and all of these particulars, which unfortunately is by no means commonly the case, there are certain other points of great importance which he seldom or never takes the trouble to investigate personally.

How many physicians, under such circumstances, deem it an additional and an imperative duty to familiarize themselves with the minute details regarding the water-supply, sewerage system, food, and comforts of the dwelling-place selected? Manifestly, these are matters of no trifling interest. No one would voluntarily spend his season of recuperation in a house of which the water-supply was contaminated by unhealthy surface drainage, of which the rooms were infected by inefficient methods of sewerage, or in which there might have been, immediately preceding his coming, some patient with typhoid fever, diphtheria, measles, scarlet fever, or other contagious or infectious disease. Yet many families, if not carefully advised as to the necessity of guarding against them, run the gauntlet of these dangers.

It is a well recognized fact among physicians practicing in cities, that on the return to town, in the fall, of families spending the summer in the country, malarial and typhoid fevers are more prevalent than at other seasons.

It is, therefore, the proper province of physicians, whose ideal aim should be to prevent disease, to so familiarize themselves with the sanitary conditions of a prospective resort as to efficiently protect those who confide in their judgment, from exposure to unsanitary conditions.

THE INJECTION OF THE LIQUID EXTRACTS OF THE VARIOUS ORGANS, AS A THERAPEUTIC MEASURE.

The experiments of Dr. Brown-Sequard with testicular fluid, which produced a certain sensation when published, have served as a basis for a veritable scientific method which is really undergoing great extension in Parisian laboratories. The principle is as follows: The glands of the organism secrete an active product which plays a rôle in nutrition, each gland having its peculiar principle. If ablation of a gland is performed on an animal, an affection is produced, which may be cured by the injection of the products of this gland, obtained by trituration (like the testicular fluid).

Similarly, certain human affections, presenting the same symptoms as the affections experimentally created in animals by the ablation of certain glands, might be cured by the injection of the juice of these glands.

For example, M. Gley, experimenting with animals on whom thyroidectomy had been performed, has been able, by making injections of the juice of the thyroid gland, to suppress accidents of pachydermic cachexia. The suppression of the accidents was transitory, it is true, and it was found necessary, in order again to terminate them, to have recourse to new injections. These results have nevertheless a real value from the point of view of the physiological action of the juices extracted from certain tissues.

An Italian physician, Vassale, had already made the same observation.

Messrs. Brown-Sequard and d'Arsonval have returned to the study of the question in its entirety, and have reported to the Society of Biology some very seductive hypotheses. They do not yet name the affections which might be and should be treated by the subcutaneous injection of the

various liquids yielded by the organism; but several physicians of Paris purpose employing in one of the most dangerous of diseases —leucocythemia—injections of a mixture of lymph and of juice extracted from the lymphatic ganglions and from the spleen.

The same experimentors have also injected extracts of the muscles, in order to study the variation of muscular power after these injections, and their results seem to be positive. They have also injected extracts of the pancreas into animals, in whom this organ had been destroyed. Will they cure the diabetes thus produced? This is a question which remains to be studied. They propose, moreover, to employ for transfusion, the blood of the testicular veins of animals, this blood containing the active principle of the testicle; but in the very numerous cases, in which the iniections should be repeated daily for a long time, it will be readily understood that transfusion cannot be employed.

In *resumé*, Messrs. Brown-Séquard and d'Arsonval maintain that each tissue and, more generally speaking, each cellule of the organism, secretes special products or ferments, which are introduced into the blood, and which influence through this medium all the other cellules, thus producing a solidarity among all by a mechanism other than the nervous system.

The process employed for exhausting a tissue, or any organ whatever, of the liquids and ferments which it contains, consists in macerating it in concentrated glycerin (2 or 3 times the weight of the tissue). The glycerin dehydrates the tissue almost completely by endosmosis, and the extracts thus prepared preserve their specific properties for years. M. d'Arsonval possesses extracts of pancreas, of muscles, and of beer-yeast which he prepared in 1887 for Claude Bernard, and which are yet active. These preparations with glycerin should be diluted with two or three times their volume of sterilized water, when it is desired to employ them in subcutaneous injections. The injection is scarcely more painful than with water, and no alteration of the liquid is to be feared, or any accident resulting from the puncture.

We should add that 400 flasks of testicular liquid have actually been issued by the laboratory of the College of France, and that this liquid has been sufficient for more than 12,000 injections, without the report of a single accident.*

THE PARASITE OF QUARTAN AQUE.

In the Zeitschrift für Hygiene, vol. x, p. 137, appears the first of a series of papers by Camillo Golgi, demonstrating, by means of photography, the development of the parasite found in malarial fevers. In an abstract of the paper in the British Medical Journal, it appears that this paper deals with the amœba malariæ febris quartanæ, the form found in the quartan type. In 1880 Laveran stated that these parasites are present in every case of malaria, and in no other condition, and that they are probably the cause of the disease. His observations have been confirmed by pathologists in all parts of the world, and at the present time the weight of proof seems to be in favor of his contention.

Golgi claims to have been the first to demonstrate that the different forms described as occurring in the blood are simply modifications of one form, and, further, that these metamorphoses follow each other according to a fixed law. This development takes place within, and leads to the destruction of the red blood-corpuscles. At first the amœba-like parasite is small and non-pigmented; it increases in size at the expense of the substance of the blood-corpuscles, becomes pigmented, and, after passing through a series of metamorphoses, finally ends in a process of segmentation. This process of segmentation takes place at the same time as, or a short time before, the onset of the febrile paroxysm, and has for its object the formation of a new generation of the parasites. The pigment granules stored up in the body of the parasite take no part in this process of segmentation, and hence, on its completion, escape into the blood plasma, where they are seized upon by the white blood-corpuscles and cells of the liver, spleen, etc. The new brood of parasites at once pass into fresh red blood-corpuscles, and so commences anew the cycle of metamorphoses

*[For the facts presented we are indebted to L'Union Médicale.]—Ed.

leading up to the next paroxysm of fever. The period of time which elapses between the entrance of the parasites into the red blood-corpuscles, and their segmentation, is exactly three days, and hence arises the periodicity of the quartan type of malarial fever. During the first and second days the parasite passes through the various phases of its development within the blood corpuscles; on the third day, segmentation takes place, the new brood is set free, and fever results. In other words, the period of apyrexia corresponds with the endoglobular growth of the parasite.

Golgi states that a knowledge of these developmental stages is of immense practical importance for the purpose of diagnosis, by which an almost mathematical degree of accuracy can be arrived at, and that it is no exaggeration to say that by the simple microscopic examination of a few preparations of blood the physician is in a position to tell when the last attack of fever occurred, to foretell the time of the next attack, and further, to recognize what type of malarial fever he is dealing with. The simple quartan fever is explained by Golgi as resulting from the development, in the blood, of one set of the parasites, which ripen every three days, while the double and triple quartan fevers are caused by the development of two and three sets respectively, coming to maturity on consecutive days. This hypothesis, of course, cannot apply to the tertian type of malarial fever, since in this the febrile paroxysms follow each other with an interval of only one day of apyrexia intervening, instead of two days as in the case of the quartan type. Golgi is of opinion that he has brought forward satisfactory evidence to show that tertian ague depends on the presence in the blood of a distinct variety of the malaria parasite, which passes through the developmental phases in two days instead of in three. In regard to classification, Golgi holds that the various clinical types of intermittent fever are caused by varieties of one and the same parasitic species, and that this belongs to the genus amœba. The twelve photographs which illustrate his first paper deal with the development of the parasite of quartan fever, and show, surrounded by normal red blood-corpuscles, its successive metamorphoses.

SOME INTERESTING EXPERIMENTS ILLUSTRATING THE EFFECTS OF QUININE ON THE HEALING OF WOUNDS.

Dr. Sokoloff has published some interesting observations on the effect of quinine, administered to a wounded animal, on the granulation and cicatrization of the wound.* The experiments were conducted on rabbits. The fur was shaved from a portion of the paw, and an incision made through the skin and into the muscular tissue, the external wound being then sewed up, and the whole dressed antiseptically. Subsequently microscopical observations were made on sections including the wound. Twenty-four rabbits which were experimented on in this way were treated with hydrochlorate of quinine, half a grain of which was given per diem for each kilogramme of body weight. A similar number of control rabbits were operated upon in precisely the same manner, but were not given quinine.

Dr. Sokoloff gives a detailed description of the microscopical appearances observed each day for eight days in the two sets of cases. The effusion of blood was much the same in both, but there was a marked difference in the condition of the muscular tissue. In the control animals this lost its striped character, the portions in the immediate vicinity of the wound presenting the appearance of an amorphous homogeneous substance containing here and there a few muscular fibres, or breaking up into separate pieces as in coagulation necrosis. Besides this, the muscular tissue gradually disappeared, leaving sheaths of sarcolemma either empty or filled with cells.

In contrast to this state of things, sections taken from the animals treated with quinine presented little or no sign of muscular degeneration, the fibres preserving their proper structure. With regard to the cellular elements in the control animals, two forms were found in the neighborhood of the wound—a large number of multi-nuclear leucocytes, and a much smaller number of large round or oval cells with a single large nucleus. The mean diameters of these cells after three days were 19μ and 16μ, after five days 17μ and 13μ, and after eight days 18μ

* Reported in London Lancet, May, 1891.

and 15μ. During this period the nuclei presented various karyokinetic figures. In animals treated with quinine there were no multi-nuclear cells, all being oval with a single nucleus, and smaller than the corresponding cells in the control animals, the mean diameters being after three days 13μ and 10.5μ, after five days the same, and after eight days 14μ and 11μ. The cells were, moreover, more numerous than in the control observations. In the quinine-treated animals the karyokinetic process commenced and finished earlier than in the others, the chromatic filaments being also less numerous but thicker.

Altogether there was less inflammation with quinine than without; in short, without quinine there was Zenker's degeneration, with quinine none.

MUSIC AS A THERAPEUTIC AGENT.

Among the extra-medicinal means that may be employed in the treatment of nervous diseases, the mental effect of music may often be resorted to with advantage in controlling abnormal nervous manifestations. Dr. G. H. Lilley has recently contributed to the columns of the London Lancet, a paper on the Therapeutics of Music in Mental Diseases, and his suggestions are worthy the consideration of all intelligent physicians who recognize the influence of mental impression on physical conditions.

Miracle workers, mystics, and charlatans, have in all ages made much of the influence of music on the minds of the impressible, whether truly suffering or not. There can be no doubt also that they have, as a class, been indebted in no small degree to their appreciation of this and the like natural aids for an apparent mastery of physical effects, too commonly imputed to other personal and mysterious gifts of healing. In this respect they may teach us a lesson. The possession of a refined musical taste or a so-called "ear" may be denied to many persons. Some conception of harmony is probably almost universal. This understanding differs, as it must, with different minds and moods, but it exists in some degree and form, we should say, in every human being. Each temperament knows and could show, if intelligence and language were adequate, the terms of its own simplest musical coëfficient, and perhaps even some of its remembered variations. The cheerful rhythm that lightened for him an hour of gloom, the flowing cadence that absorbed his petulant irritation, are as the kindred spirits of a man's family. What wonder, then, if music be found equal to the treatment of some of his diseases—those, namely, which concern his mental and nervous condition.

In connection with this subject, Dr. G. H. Lilley discusses with considerable force the effect of this ancient remedy on those disorders of nutrition which explain so many departures from the normal health of mind and body. In a brief and lucid argument, he illustrates the close resemblance in physiological action between music and other stimuli which regulate the vaso-motor activity employed in tissue nutrition. Some general observations on the mode of applying the treatment suggested are likewise worth reading, and the paper as a whole forms a useful and practical contribution to the hygiene of the nervous system.

In an article on the relations of medicine and music, by Ephraim Cutter, M.D., LL.D., F. S. Sc., published in Philadelphia Medical Bulletin, it is stated that music is an anodyne, a soother of nerves; that parents and guardians of children of consumptive tendencies should avail themselves of musical culture as a prophylactic or preventive of diseases. Universities should have schools of music for physical, mental, moral, and intellectual culture; music should be prescribed by physicians, and instruction as to its application to the treatment of disease added to our materia medica.

WHEN TO STIMULATE.

The following are the physical heart signs which seem to indicate the early use of stimulants: 1. Early subsidence of the first sound, observed over the left ventricle. 2. Diminution of the first sound over the right ventricle. 3. The heart acting with a single, and that the second, sound. 4. Both sounds being audible, but their relative intensity being changed, so as to represent the action of the heart of a fœtus *in utero*. 5. With these signs, progressive diminution of impulse, which occasionally becomes imperceptible, even when the patient lies on the left side.

Book Notices.

PRACTICAL NOTES ON URINARY ANALYSIS. By William B. Canfield, A.M., M.D., of the University of Maryland. Cloth; square 12mo; pp. 93. Price 50 cents. Published by Geo. S. Davis, Detroit.

It is generally admitted that in every case of doubtful diagnosis the urine should be examined, yet the science of such analysis is usually considered an intricate one, beyond the reach of the ordinary or busy practitioner. To make it simple, however, has been the aim of Dr. Canfield, and that he has succeeded is evidenced by the fact this work has already been adopted as a text-book by several prominent medical colleges.

In this volume are laid down, simply and plainly, the most simple and reliable tests for detecting normal and abnormal substances in urine, while the errors that are likely to creep in during such testing are carefully pointed out, and the reasons therefor explained. The care taken in inculcating safeguards against mistakes is highly creditable to the work and intelligence of the author.

As a whole, we may say the volume is convenient, correct, practical, and embodies all of value that is to be had in the larger textbooks. Finally, it is offered at a price within the reach of the most impecunious practitioner or student.

WOOD'S MEDICAL AND SURGICAL MONOGRAPHS. Vol. x. No. 2. May, 1891.

This volume comprises papers by four well known authors on subjects of the greatest interest to physicians, viz.: Cure of the Morphine Habit, by Oscar Jennings, M. D.; Notes on Examination of the Sputum, Vomit, Fæces, and Urine, by Sidney Coupland, M.D.; Mental Affections of Childhood and Youth, by J. Langdon Down, M.D.; Differentiation in Rheumatic Diseases, by Hugh Lane, L.R.C.P.

The first condition of success in the treatment of disease is conceded to be intelligent diagnosis. The proper examination of sputum, vomit, fæces, and urine, is too infrequently resorted to by the average practitioner, through lack of appreciation or knowledge of the details necessary to determine the significance of the state of the excretions as a guide to the interpretation of pathological conditions. To point out the way to acquirement of this knowledge, is the object of Dr. Coupland's paper.

The Cure of the Morphine Habit is a common-sense statement of the agents which are of service in the malady, and of their limitations, and the extra-medicinal means that must be resorted to in order to effectually prevent the ravages of this black beast of medical practice.

Much of this number is devoted to Dr. Down's paper. "As the twig is bent the tree's inclined," and the possibilities of ameliorating by proper remedial measures a predisposition to mental affections in childhood are greater than are ordinarily recognized. A careful study of hereditary influences and environment, and proper hygienic, dietetic, and medicinal regulations, may do much to combat the ills to which children are heirs.

Rheumatism is one of the affections which baffle the skill and resources of the most expert. To distinguish between its various forms, is essential to the application of remedies. This, Mr. Hugh Lane endeavors to make clear.

INTERNATIONAL CLINICS. A Quarterly of Medicine, Gynæcology, Pediatrics, Neurology, Dermatology, Laryngology, Ophthalmology and Otology. By Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain and Canada. Published quarterly by the J. B. Lippincott Co., Philadelphia. April, 1891, number.

This is the first number of this new departure in medical publication, the prospectus of which has already appeared in our review columns.

Each volume will be issued quarterly and comprise about 350 pages, handsomely printed and bound in cloth, at $2.75 per volume; and half leather, at $3.00 per volume. Subscriptions will be received for one year, or for four volumes, but not for single volumes. All volumes are to be handsomely illustrated.

It is intended by the publishers that this work shall be to the profession, post-graduate instruction from the most distinguished teachers of medicine here and abroad, about two hundred and forty eminent writers and teachers having agreed to contribute.

The first volume before us contains thirty-five papers, illustrated by twelve plates and eighteen figures. It is well edited and indexed, and the complete work each year gives promise of affording a most helpful reflex of the opinions of recognized authorities as to the differential diagnosis, prognosis and treatment of diseases.

PRACTICAL INTESTINAL SURGERY. By Fred. Byron Robinson, B.S., M.D., Professor of Anatomy and Clinical Surgery, Toledo Medical College. Leisure Library series. Two volumes; cloth; square 12mo; pp. 400. Price, 50 cents per volume. Published by Geo. S. Davis, Detroit.

This is at the same time one of the most interesting and most practical brochures ever offered the medical profession. Especially will it be found of value to the comparative anatomist and physiologist; likewise to those who are entering, or have entered, upon the specialties of intestinal and pelvic surgery.

Intestinal surgery has been completely revolutionized during the past half-decade, and its progress during that time has had no parallel in history. The most notable improvements, perhaps, have been in intestinal anastomosis. In spite of the value of the inventions of perforated plates, etc., by Senn, Cornill, Mates, Brokaw, Davis, and others, it was left to Dr. Robinson to win laurels above all by a new invagination operation, by a modification of Jobert's operation, and by the invention of segmented rubber and raw-hide plates.

Besides, Dr. Robinson presents new views, and new evidence of the dangers relative to invagination, with suggestions how to avoid by definite intestinal *technique*. As a whole, the work possesses rare interest for medical scholars generally, and surgical workers in particular.

A TEXT-BOOK OF BACTERIOLOGY. By Carl Fraenkel, M. D. Third edition. Translated and edited by J. H. Linsley, M. D. Octavo, 380 pages. Extra muslin, $3.75. New York: William Wood & Co.

The want of such a book has long been felt. The translator says:

While a student in Professor Koch's laboratory at the Hygienic Institute in Berlin the past summer, the third edition of "Fraenkel's Grundriss der Bacterienkunde" was recommended to me as a text-book.

It is now published in six different languages.

In addition to this testimony to the merit of the work, I heard many favorable comments on it by teachers in several different laboratories on the Continent, which I visited during the summer of 1890.

A few changes have been made in the book, and the presentation of the matter changed from the lecture style.

The book does not claim complete or exhaustive discussion of the subject, and presents no statements from literature. * * * Only such facts and observations have been given as were examined by myself. * * * I have at all times been assisted by Dr. Koch's weighty advice, and am thus fortunate enough to know that the views presented are in complete harmony with those of the master of recent bacteriology.

MATERIA MEDICA AND THERAPEUTICS. With Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, A. M., M. D. Vol. II, of a Treatise on Materia Medica, Pharmacology, and Therapeutics, being an independent volume on drugs. F. A. Davis, Philadelphia, Publisher. Pages 675. Price, cloth, $3.50.

Prof. Shoemaker's work, Materia Medica, Pharmacology, and Therapeutics, is completed in this second volume. The first volume was devoted to the consideration of Pharmacy, General Pharmacology, and Remedial Agents not properly classed with drugs. The second volume supplements the first by presenting in detail the Physiology, Toxicology, and Therapy of Drugs.

The author has presented in this work a conveniently arranged epitome of the modern application of remedial agents to the cure of disease. The field covered is a most extensive one, including a summary of the available modern Materia Medica, with all information required for their intelligent use, such as the strength, dosage, and most desirable formulæ of official preparations, and those more recently added to the Materia Medica.

The physician of to-day has little time to theorize, and prefers to confine his medical reading to established facts concerning the treatment of the diseases he daily copes with. To such practical men this work will be most valuable in affording, in convenient form, a guide to the intelligent use of remedial agents.

PLAIN TALKS ON ELECTRICITY AND BATTERIES. With Therapeutic Index for General Practitioners and Students of Medicine. By Horatio R. Bigelow, M. D. Published by P. Blakiston, Son & Co., Philadelphia. Pages 85.

This little brochure presents, under the headings of Definitions, Static Electricity, The Galvanic Current, The Faradic or Induced Current Motor Points, an explanation of the theory of the nature and therapeutic application of electricity. It should be of service to the student and general practitioner who is uninformed as to this subject; the specialist in electro-therapeutics, however, will require more elaborate and complete works for his guidance.

FEVER, ITS PATHOLOGY AND TREATMENT BY ANTIPYRETICS. An essay to which was awarded the Boylston Prize of Harvard University, July, 1890. By Hobart Amory Hare, M. D., B. Sc. Published by F. A. Davis, Philadelphia. Pages 196; price, $1.25.

This volume is No. 10 in the Physician's and Student's Ready Reference Series, and it is a most valuable number of this series. The rapid addition to our materia medica of antipyretics and their extensive use makes a *resumé* of their judicious application a *sine qua non* to their safe and intelligent administration. Dr. Hare's essay will be found a helpful guide to this requisite information which represents conditions derived from the combined experience and reports of the most careful observers of the action of modern antipyretics. It is an opportune time for its issue and it will make a valuable addition to the library of all progressive physicians.

A COMPEND OF GYNÆCOLOGY. By Henry Morris, M. D. With forty-five illustrations. P. Blakiston Son & Co., Philadelphia, Publishers. Price, $1.00. Interleaved for notes, $1.25.

These compends are already well known to medical readers. They afford in an inexpensive form a condensation of information in the individual subject treated. Fourteen have already been announced, covering a variety of subjects. This latest number is a good *resumé* of the subject it presents, and its text is adequately illustrated by forty-five line drawings which materially aid in elucidating the lessons taught.

Notes and News.

Halviva, a New Substitute for Quinine.—

The name of a new remedy is halviva, a substance prepared from kreat, an East Indian plant. Dr. G. Yeates Hunter, formerly Brigade Surgeon in the Bombay Army, describes it in the British Medical Journal of March 7th, 1891. He says it has long been in use in India as a remedy for malaria, and as a tonic and restorative. It possesses all the anti-malarial properties of quinine, without apparently any of its disadvantages. It produces none of the head symptoms or nervous irritability so often seen after the long-continued use of quinine, while its therapeutic action is much more reliable. Again, kreat may be taken with great advantage, Dr. Hunter maintains, as a prophylactic, whilst the injudicious use of quinine for that purpose in malarial countries has resulted, in many instances, in marked deterioration of health. As a tonic, the writer declares, halviva is unrivaled, being a pure, clean bitter, without astringency, and acting as a gentle laxative by increasing the secretion of bile. It is of great service in indigestion accompanied by constipation, and is also useful in gouty dyspepsia.

Dr. Hunter does not speak of its possessing any antipyretic properties, and it is probable that he refers to its use in the chronic forms of malarial poisoning rather than as a remedy for acute paludal fevers. So it would appear that we are not, after all, to be freed from the tyranny of the chemical laboratory, and phenylacetamid, dimethyloxychinolin, para-acet-phenetidin, tetrahydroparamethyloxychinolin (or tetrahydroparachinanisol), and other such like simples, must yet be prescribed by the fever-fighter who puts not his faith in cold water.—*Medical Record.*

A Four-Years' Course at the Harvard Medical College and the University of Pennsylvania School.—

A very important step has recently been taken by the Faculty of the Harvard Medical School in increasing the course of study from three years to four. The proposed change will not go into operation until September, 1892, and will not affect students now in the school nor those who may enter during 1891.

A similar move towards higher medical education has been taken by the Medical Faculty of the University of Pennsylvania. At a meeting of the Board of Trustees of that university, held May 21st, Dr. Pepper, the Provost, made an offer of $50,000 toward an endowment fund of $250,000, and of $1,000 annually toward a guarantee fund of $20,000 annually, for five years, conditioned upon the establishment of an obligatory graded four-year course of medical study. The medical faculty pledged themselves to carry out this proposal, and to enter upon the four-year course in September, 1893, and subscribed $10,000 annually for five years to the endowment fund. The Board of Trustees approved the proposed change, but postponed their assent until the success of both funds had been demonstrated.

There is reason to believe that a similar change is seriously contemplated in New York. A nearly simultaneous change in New York, Boston, and Philadelphia, would compel other schools to follow their example.

A New Antiseptic.—

At the Académie de Mèdècine, on April 18th, M. Polaillon read a paper contributed by Dr. Berlioz, of Grenoble, on a new antiseptic agent called "microcidin," which is composed of 75 per cent. of naphtholate of sodium and 25 per cent. of naphthol and phenyl compounds. It is a white powder obtained by adding to fused β-naphthol half its weight of caustic soda, and allowing the mixture to cool. It is soluble in three parts of water, and the solution, which is cheap, is said to possess considerable antiseptic powers without being toxic, caustic, or injurious to instruments or linen. The antiseptic properties of microcidin, while inferior to those of corrosive sublimate or naphthol, surpass those of carbolic and boracic acids ten and twenty times, respectively. Microcidin is eliminated by the kidneys, and is antipyretic. M. Polaillon has experimented with this new agent, largely in his wards, as a dressing to recent and other wounds, utilizing it as a dressing, after a preliminary cleansing of the raw surface with a 3-per-cent. solution, gauze soaked in the same and covered with a layer of oil silk and a thick pad of cotton-wool. The results are reported to have been excellent.—*Lancet*, (London).

Action of Drugs on the Vomiting Centre.—

C. T. Thumas (Virchow's Arch., Band 123, pp. 44–69) has attempted to localize the position of the vomiting centre in dogs. The medulla oblongata and upper part of the spinal cord were divided transversely at various levels, and the position of the centre was defined by the application of a 2 per cent. solution of apomorphine to the medulla. It seems that pencilling the posterior angle of the fossa rhomboidalis with apomorphine causes violent and repeated vomiting. The section experiments showed that 5 millimetres in front of, and behind the calamus scriptorius, there is an area lying in the depth of the bulb, after division of which the subcutaneous injection of apomorphine no longer produces vomiting. Section of other parts of the medulla is followed by vomiting after the use of apomorphine. The direct application of emetin to the medulla oblongata also causes vomiting, but copper sulphate and zinc sulphate similarly applied have no effect.

The "Grip" Bacillus.—

A series of interesting experiments has been conducted in the University of Illinois on the bacillus of the "grip." The results have been very satisfactory. The elements to work on were obtained from the saliva of twenty-two persons sick with the disease, and in each case the bacillus was distinctly discernible under the microscope. It was found that by cultivation in a diluted beef tea the germ grew and flourished, and in all particulars corresponded with that taken from individual cases in human beings. The bacillus has been photographed, and the University has several of these photographs, in which uniformly appear the germs like little beads on a fine string.

A New Way to "Beat" the Doctors.—

A well known New York surgeon has sent us an advertisement that reads as follows: "Co-operative Medical Service, —— West —— Street, intended to give service of best regular physicians at nominal rates. Fifty cents fee. Confinements, $3. Visit or pri-

vate office consultation." Our correspondent speaks of the scheme, denoted by this advertisement, as another obstacle to success in earning a livelihood by medical practice, one added to the chronic and growing competition of the hospitals and dispensaries. We are confident, however, that this venture, utterly foreign as it is to American ways, will delude only such patrons as are not worth having.—*N. Y. Med. Journal.*

To Clarify Muddy Water.—

To every gallon of the liquid add 5 grains sodium bicarbonate, stir well and add from 3 to 5 minims of solution of persulphate of iron (Monsel's solution), and again stir. The reaction produces carbonate of iron, sodium sulphate, and water with the escape of carbonic acid (thus, $FeSO_4+2NaHCO_3=FeCO_3+Na_2SO_4+H_2O+CO_2$). The heavy carbonate in falling carries down the suspended impurities. A similar reaction takes place when a ferrous chloride is used, the product being ferrous carbonate.—*National Druggist.*

The New Editor of the Journal of the American Medical Association.—

The Trustees of the Association met in Chicago on Wednesday, May 13th. Dr. J. C. Culbertson, for many years editor of the Lancet and Clinic of Cincinnati, was placed in nomination and received the unanimous vote of the Trustees. Dr. Culbertson will be succeeded in the editorial management of the Lancet and Clinic, by Drs. A. B. Richardson, J. C. Oliver, and L. S. Colter.

New York Post-Graduate Medical School.—

At the meeting of the Directors of the New York Post-Graduate Medical School and Hospital, H. J. Boldt, M.D., was made Professor of Diseases of Women; William James Morton, M.D., Professor of Electro-Therapeutics; and Aug. Caille, M.D., Professor of Diseases of Children.

An Italian Pharmacopœia is about to be published. This will be the first National formulary, those hitherto in use having been of the most varied description, consisting largely of more or less correct translations of French formularies, and having no general or official recognition.

Therapeutic Brevities.

Treatment of Hepatic Colic by Olive Oil.—Dr. Willemin presents in Bulletin General de Therapeutique an account of nineteen cases of hepatic colic occurring in the practice of others, which have been successfully treated by the use of olive oil, and nine cases occurring in his own practice treated by the same agent. In all these cases there was a cessation of pain soon after administering the oil. The usual quantity given was six ounces of the pure oil, repeating the dose until all pain had disappeared. Nausea and vomiting promptly ceased, and icterus gave way before the use of the remedy. The fever sometimes existed a longer time. If a second attack followed, another dose of the oil was given with the same happy results. The oil sometimes gave relief to pain when light foods and opiates could not be tolerated by the stomach. Many months sometimes elapsed before the attacks returned, if at all. The author does not believe it possible to relieve the sufferings of hepatic colic by suggestion alone, but maintains that something more is necessary to relieve these horrible pains. Olive oil seems to act as a solvent of the biliary concretions, rendering them more difficult of detection after they have been passed.

Analgesic and Anti-Rheumatic Action of Euphorin.—Dr. Adler (Wien. med. Wochenschr., April 25th, 1891) records his experience with euphorin. He used it in twenty-four cases: Three supraorbital neuralgia; one chronic cephalalgia; three sciataca; three acute polyarthritis; nine chronic articular rheumatism; three muscular rheumatism; and two cases of cephalalgia during the reaction stage of injection with Koch's "lymph." It was also used in six cases of habitual hemicrania with "wonderful" effect. The supraorbital neuralgia, the muscular rheumatism, and the sciatica cases were all quickly cured; the others were mostly much improved. The dose given was six grains three to five times daily. No unpleasant symptoms were ever observed. In two cases of pulmonary tuberculosis it acted satisfactorily as an antipyretic, reducing the temperature in about half an hour.

Hydrochlorate of Phenocol.—Dr. Hertel, assistant in Prof. Gerhardt's clinic, has published an account of some trials of a new antipyretic, hydrochlorate of phenocol, a white crystalline powder which is readily soluble in water. The dose required is from

seven grains and a half to fifteen grains, and this reduces the temperature from 0.9° to 2.7° F., without producing rigors, sweats, or any other disagreeable symptoms. The effect was very marked on some cases of rheumatic fever which had been treated without result by antipyrin, salicylates, phenacetin, and antifebrin. Here seventy-seven grains were given during the twenty hours, and appeared to reduce the pain in the joints as well as the temperature. In a case of severe gonorrhœal rheumatism, however, no effect was produced. In phthisis, seventy-seven grains during the twenty-four hours soon reduced the temperature almost to normal. It was noted that more effect was produced by the drug on the temperature during the day than on the evening rise. There was no injurious effect on the kidneys, but the urine was colored a deep reddish-brown by seventy-seven grains.

Common Thyme in Whooping-Cough.—Common thyme, which was recommended in whooping-cough three or four years ago by Dr. S. B. Johnson, is regarded by Dr. Neovius, who writes a paper on the subject in a Finnish medical journal, as almost worthy of the title of a specific. During an epidemic of whooping-cough he had ample opportunities of observing its effects, and he came to the conclusion that if it is given early and constantly it invariably cuts short the disease in a fortnight, the symptoms generally vanishing in two or three days. They are, he finds, liable to return if the thyme is not regularly taken for at least two weeks. Regarding the dose, he advises that a larger quantity than Dr. Johnson prescribed be taken. He gives from one ounce and a half to six ounces per diem combined with a little marshmallow syrup. He never saw any undesirable effect produced except slight diarrhœa. It is important that the drug should be used quite fresh.

The Effects of Orexin on Assimilation.—The effects of hydrochlorate of orexin on the assimilation of nitrogen and fat, and on the nitrogenous metabolism, in healthy as well as diseased subjects, has recently been studied by Dr. E. T. Kotliar, Chief of Professor Manassein's therapeutic clinic in St. Petersburg, the pathological cases comprising three of chronic gastric catarrh and one of carcinoma of the stomach. The results obtained are thus summarized: Orexin given in quantities of from five to twelve grains daily, for four or five days, increases the assimilation of nitrogen both in healthy and in diseased subjects. It increases the assimilation of fat in diseased subjects. The nitrogenous assimilation is lessened to a marked degree in healthy persons, but much less so and less constantly in diseased subjects. In both classes of individuals the appetite is improved, the sensation of hunger not, however, being always increased.—*Lancet.*

Iodine Compounds of Antipyretics.—Dr. E. Münzer has recently made some observations in Prof. von Jaksch's wards in Prague on iodantipyrin or iodopyrin, which was first prepared by Dittmar some five or six years ago. It is a crystalline substance, very slightly soluble in water or alcohol, and, chemically speaking, is simply antipyrin in which one atom of hydrogen is replaced by iodine. It appeared to have much the same antipyretic and analgesic properties as antipyrin itself, but produced no unpleasant effects. In one case where there was very severe frontal headache, probably of syphilitic origin, its action was remarkably prompt, a single dose of fifteen grains sufficing for a permanent cure. In a case of subacute rheumatism, too, a couple of doses entirely cured the patient. Observations with iodacetanilid were also undertaken, but no antipyretic or analgesic effects could be detected.

Treatment of Boils,—Dr. Veiel gives in the Gazette Medicale de Liege the following process for destroying boils: Where the boil can be aborted, which is very seldom, he injects it with carbolic acid, perforates the furuncle with a silver needle, and introduces a crystal of sublimate. He attempts to prevent the formation of a core, by applying hot cataplasms, and also applies a $\frac{1}{10}$ per cent. solution of the sublimate. If this makes the skin very irritable, a 4 per cent. boric acid solution is applied instead. These applications are made during the day. At night an ointment of 6 drachms each of oxide of zinc and vaselin, and ½ drachm of boracic acid, is used. He prevents the formation of new boils by applying a solution of the bi-chloride of mercury in 90 per cent. alcohol three times a day.—*Journal de Medicine.*

Chloride of Zinc in Sweating Feet.—Winogroeoff has used for several years a solution of chloride of zinc for sweating feet. The strength employed is 5 to 8 parts in 100. He washes the feet with tepid water, and then with a wad of cotton applies the solution of the zinc salt to the feet. When ulceration exists between the toes, he afterwards washes

off the zinc solution. Another application is made in from five to seven days. After the first wash, the sweat and odor will begin to diminish. The zinc acts as a caustic in destroying the endoriferous glands. It should never be employed in the absence of a doctor.—*Nouveaux Remedes*,

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Jambul in Diabetes.—M. Rosemblat published, in the Vratch, an account of a case of diabetes which he had treated by the use of *Syzygium jambolanum* which he had given in the form of a powder and in the form of a fluid extract. He observed a notable diminution in the quantity of glucose eliminated. There was no elevation of temperature, no profuse sweating, no inflammation of any organ following the use of the drug. This tends to confirm the results stated by Prof. Zevasher who observed the efficacy of jambul in eight cases of diabetes, and which he presented in a communication to the Congress at Berlin.—*L' Org. Conf. Medicale.*

Strychnine Injections in Diphtheritic Paralysis.—Dr. W. Rozenzweig of Neuwied reports four cases of paralysis of the soft palate after diphtheria, occurring in children of from six to twelve years old, in which a rapid cure was effected by the hypodermatic use of strychnine. The doses were from two to three milligrammes, and were injected into the neck. In one case a remarkable improvement was produced by the first injection, and in another a complete cure was obtained by three daily injections. In none of them was treatment required beyond a week.

Subcutaneous Injections of Camphorated Oil.—According to B. Alexander, of Berlin, hypodermatic injections of camphorated oil have a cumulative effect, causing after the fifth injection, pains in the head. When used in diseases of the respiratory organs in small doses, it has an antipyretic effect. In heart diseases where digitalis does not seem to be of further use, camphor injections will enable the action of digitalis to be again resorted to.—*Pharm. Z't'g.*

Acetic Acid in the Treatment of Diphtheria.—J. Hirsch, in a pamphlet which he has published upon the treatment of diphtheria with acetic acid, states that during the nine years in which he has employed this agent, he has not lost a case of diphtheria. He applies the acid to the inflamed parts in the first stages of the disease. He says if more agreeable the domestic spiced vinegar may be used.—*Pharm. Z't'g.*

Medical Progress.

THE TREATMENT OF SPASMODIC ASTHMA.*—My object in the preparation of this paper is to bring to notice a remedy which has, within the last few years, been prescribed for the purpose of mitigating the attacks of asthma. The remedy alluded to is euphorbia pilulifera, a plant which grows by the way-side in Australia, and which, according to Australian medical literature, has been used as a domestic remedy in the treatment of asthma and bronchial affections by the inhabitants of that island.

In order to make my remarks as brief as possible, and to make this paper practical without being verbose, it will be necessary to give the clinical history of a few of the cases which have come under my observation, and have been treated by this drug.

CASE 1.—George S., age 45 years. Came under my observation January 9th, of this year. He stated he had frequent attacks of asthma during the past ten years, and during the last three years the paroxysms had been more frequent and severe. After a careful examination of the chest, there was no evidence of structural changes in either heart or lungs. The kidneys were in a healthy condition, the appetite good, and the bowels regular. In fact, he was in the enjoyment of good health (as he expressed it), if it were not for these periodical attacks of asthma. He was ordered a mixture of equal parts of the fluid extract of euphorbia pilulifera and glycerin, with directions to take a teaspoonful every four hours during the day, and to report in the course of a week or ten days. When he returned to my office, he stated he slept well at night; had no return of paroxysms of asthma; found one or two teaspoonsful a day sufficient to ward off the attacks. Stated he had not slept so well for years.

This patient has been under observation up to within a few days, and has been thus far relieved from the annoying paroxysms of asthma.

CASE 2.—Mrs. Z., age 50 years. An American by birth. Has usually had fair health, but during the past seven years has had frequent attacks of asthma. During the past year the attacks had been more frequent and severe, especially during the autumn and spring. No organic disease of either heart or lungs could be detected

* Read in the Section of Practice of Medicine and Physiology, at the forty-second annual meeting of the American Medical Association, held at Washington, D. C., May 5-8th, 1891, by J. F. Jenkins, M. D.

upon examination of the chest. There were no structural changes in the kidneys. Appetite and digestion fair. This patient had been previously under treatment for asthma, and at that time the paroxyms were mitigated by a combination of grindelia robusta and iodide of potassa. At this time she was given a mixture of the fluid extract of euphorbia pilulifera and glycerin, equal parts, of which she was to take a teaspoonful every four hours during the day, and in the course of a week to report. When the patient returned she stated the paroxysms of asthma had ceased under the influence of the medicine, and she had rested quietly all night in the recumbent posture, while heretofore it was impossible to sleep without being propped up in bed.

Case 3.—Mrs. A., age 43 years, weight about two hundred pounds. American by birth. Had frequent attacks of asthma. Heart and lungs sound. Appetite and digestion good. Suffered more from asthmatic attacks during autumn and winter than any other seasons of the year. Frequently obtained relief by inhaling the fumes of burning nitre paper. Prescribed the fluid extract of euphorbia pilulifera and glycerin, equal parts, of which the patient was to take a teaspoonful every three hours. Her husband reported that the medicine had no effect on the paroxysms of asthma, and that his wife's asthmatic breathing was relieved by smoking cubeb cigarettes.

Case 4.—Miss R., age 13 years, had suffered from asthma from early childhood. No organic disease could be detected of either heart or lungs. No structural changes in the kidneys. Appetite and digestion fair, and patient well nourished. She was prescribed a mixture of equal parts of the fluid extract of euphorbia pilulifera and glycercin, with directions to take a teaspoonful morning, noon, and night. Her mother reports that the daughter has breathed better, and suffered less from asthma than at any period for several years.

Within the past year thirteen cases of spasmodic asthma have come under treatment, and in each case the fluid extract of euphorbia pilulifera has been prescribed with satisfactory results, except in one or two cases where it failed to relieve, although no cause could be assigned for its failure. There were no complications, but the drug failed, like many others which have a decided influence in the treatment of spasmodic asthma. In one instance, where mitral lesions were present, a pill containing one one-hundredth of a grain each of trinitrin and strophanthin, night and morning, in connection with half a drachm of the fluid extract of euphorbia pilulifera every four hours during the day, gave the patient relief from the paroxysmal attacks of asthma, which were no doubt of neurotic origin.

Finally, permit me to briefly state the conclusions arrived at in twenty-five cases of spasmodic asthma:

Euphorbia is a remedy of special value in the treatment of all forms of asthma. In the absence of organic changes in the pulmonary and renal structures, and when the atmospheric conditions are favorable, relief will usually be afforded after taking the first dose. Being excreted largely by the liver and kidneys, the condition of these organs must be taken into consideration when estimating the probable effect of the drug. It has no special action in controlling the sudden attacks, but may be depended upon in young and robust individuals to effect a radical cure, providing they will continue to reside in an atmosphere that is dry and bracing, situated in a moderately elevated locality, where there are no, or comparatively few, sudden changes.—*Jour. Am. Med. Association.*

Minor Uterine Surgery.—J. M. Baldy, M. D., Prof. Gynæcology in Philadelphia Polyclinic, makes the following suggestions in a paper in the Medical News on this topic:

The Uterine Sound.—On the whole, it had been better for womankind had this instrument never been invented. For the application of the electric current it has its uses, and in an occasional case where one is uncertain as to the connection of the uterus with a given tumor it may possibly give some definite information. For the purpose of measuring the depth of the uterine cavity, or for locating the position of the fundus, as it is generally used, it is absolutely superfluous. Anyone who is forced to use it for these purposes, unless it be in rarely exceptional cases, must confess to himself his lack of even an ordinary amount of manual dexterity. For replacing a displaced womb it is a dangerous instrument, and its use is very painful. A movable uterus can be invariably replaced by bimanual manipulation, with the patient on the back, or in the knee-chest position, with the aid of a tenaculum and a repositor. If the organ is adherent it no longer comes under the head of simple uterine disease, and should then be dealt with by other and safer procedures. The uterine sound may be used with perfect safety in careful hands; but, as ordinarily employed, it is capable of causing consider-

able traumatism, and of carrying septic material into the uterine cavity.

Dilatation.—This operation is one which has been much abused. It is capable of much good or much harm, depending upon whether it is used carefully and in suitable cases or not. Personally, I have never had any permanent bad results follow its use. On the contrary, I have seen severe dysmenorrhœa relieved and even permanently cured; in not a small proportion of cases have I observed pregnancy follow dilatation. Patients have come to me suffering from a pelvic inflammation following a dilatation performed by others, but everything pointed to the fact that the pelvic disease had existed first and that the operation had been performed probably under a mistaken diagnosis for the relief of symptoms produced by the diseased appendages. In but one case have I had an inflammatory attack follow this operation when there was no complicating disease. In that case I made an incomplete dilatation, without ether, upon the dispensary table, in a young woman married for five years and sterile. The inflammatory attack cleared up within a week, she soon conceived, and a month ago I delivered her safely of a large, healthy baby. She made a perfect and uncomplicated recovery. I should be exceedingly loath to discard the dilators from my armamentarium, and can only attribute serious accidents following their use to a wrong diagnosis or a faulty use of the instrument.

Intra-uterine Medication.—There is undoubtedly a limited field for the application of drugs to the uterine cavity. It should not be forgotten, however, that it is often only supplementary to other treatment. It is just as rational to expect results from local applications to the uterine mucous membrane of the nose and throat. The fault here is much the same as in other minor operations—either a wrong diagnosis is made, and local applications are used to the exclusion of other and probably better methods of treatment, or they have been injudiciously and rudely applied. Certainly in chronic endometritis we may expect some good from them, especially after the application of the curette.

The Curette.—This instrument, in properly selected cases, is invaluable. In my own hands the dull curette has proved worthless, and I much prefer a sharp one. Of course the instrument is capable of harm, but so is every other that is used in surgery. If even ordinary precautions are taken in selecting cases and manipulating the curette, no damage will follow its application. For affections of the endometrium following labor, or of a fungoid character, it is exceedingly useful; I know of nothing which will take its place. In removal of retained clots, etc., in the puerperium, the finger will be found more certain.

Operations on the Cervix.—The splitting up of the cervix for dysmenorrhœa and sterility has fallen into deserved disuse; all that can be accomplished in that direction can be done with the dilators.

Emmet's operation for the closure of lacerated cervix should meet much the same fate, at least in the vast majority of cases. The only excuse for the number of such operations which are being continually performed is a fear of subsequent cancer. A simple, uncomplicated cervical tear causes no more trouble or inconvenience to the patient than does a woman's ear which has been torn through by her ear-ring. The ear would be repaired for cosmetic effects; the cervix is hidden from view, and that factor would not come into consideration. Most women have laceration of the cervix of more or less degree. If the lips are thickened, everted, and eroded, they will need treatment. Oftentimes simple scarification, followed by the application of iodine and glycerin tampons, will reduce this condition and leave a clean, healthy tear—one which will remain so until the end of time. If the lips cannot be brought into a healthy condition, or if the uterus is subinvoluted and the endometrium diseased, the case may resolve itself into an operative one; but even here a trial with electricity will often disappoint the surgeon. In my practice it is rare to see a lacerated cervix which calls for surgical repair. Cases which come to me from other men, who have advised an operation, get well without it. Oftentimes the symptoms for which the operation was proposed were found to be due, not to the torn cervix at all, but to other troubles, principally constitutional.

It is the easiest thing in the world to relight a pelvic inflammation whilst repairing a cervix, and I have seen this result follow such practice only too often.

Taking it all in all, I decidedly approve of minor uterine surgery in the field to which it is applicable, but it must be borne in mind that this field is a limited one, and one which becomes more and more narrow as our diagnostic resources increase.

MUSCULAR RHEUMATISM AND ITS TREATMENT.—The following case occurred in a man aged twenty-two: He had pain in both

the upper, and, to a less extent, in the lower extremities. The pain was in the substance of the muscles. In the neck, where it was most marked, the sterno-mastoid was most affected; in the forearms, the flexor muscles; and in the legs, the upper and outer part of the thigh. Pain was not continuous, and was worse when the muscles were put into action. The case is exceptional in that muscular rheumatism is usually limited to one muscle, or a small group of muscles. There is no absolute sign by which the disease can be diagnosed.

In the course of acute rheumatism, or, more often, the subacute form, the fibrous or tendinous extremities of the muscles are especially involved, but sometimes the body of the muscle. The term "muscular rheumatism" must not be misused for the atrophy sometimes found in rheumatism, about the joints.

Its connection with articular rheumatism is easily seen when it occurs in the course of the latter disease. Again, muscular and articular rheumatism may occur in the same individual under analogous circumstances. The above-named patient had acute rheumatism three and a half years ago. It may be a nice point to make the diagnosis from other maladies with diffuse pains.

Salicylate of sodium is successful, but not so distinctly so as in the acute articular form, and especially if this muscular affection be chronic; here analgesin may be useful. Wet-cupping, scarification, and Faradization are often efficient. Injections of pure water have succeeded. If these fail, the application of heat, douching, and massage should be tried. Prognosis is good, but pleurisy, and even pericarditis, has supervened. The pulse is sometimes irregular, and palpitation complained of; but it is impossible in the present state of our knowledge to say whether cardial manifestations are developed after muscular rheumatism. The above-named individual had an exo-cardial murmur. His illness began with a sore throat, and there was temporarily some albumen in his urine.—Prof. Potain in *L'Union Médicale*, 1891, No. 22.

Bacteria in Milk.—In a report from the U. S. Department of Agriculture, the following facts regarding Bacteria in Milk are presented:

Bacteria collect in milk and cream that have been exposed to the air, grow readily, and multiply rapidly. While growing in the milk they cause it to sour and curdle, and induce other changes. Milk, as drawn from the healthy cow, is free from bacteria. Under ordinary conditions, however, it can not be kept free from them, for they will get into it from the hands of the milker, or the teats of the cow, or from the air with which the milk comes in contact. The vessels in which the milk is kept are the most common source of contamination. The bacteria collect upon the sides and in the joints of these, and here develop in the minute portions of milk, grease, or other matters from which it is difficult to free the walls of the vessels.

Within certain limits heat increases and cold retards the growth of bacteria. Different species differ in regard to the temperature at which they grow best. Most species find the best conditions for growth at temperatures between 70° and 100° F. A few will grow quite readily at a temperature below 50° F. A temperature below freezing stops their growth. The heat of boiling water will kill the active forms, but several successive boilings are required to kill their spores (corresponding to seeds). It is not difficult to destroy bacteria after they have once succeeded in getting into the milk. This may be easily done by heating the milk to the boiling temperature for ten minutes upon three successive days. Milk thus deprived of bacteria is said to be sterilized, and if we prevent the further entrance of bacteria by closing the vessel tightly with a plug of cotton, it will remain sweet indefinitely.

The number of bacteria present in milk depends chiefly upon the length of time the milk has been standing and upon the temperature. Estimates made upon milk under different conditions have shown from 300,000,000 to 600,000,000 per quart. The rapidity of their growth is marvelous. The effect of temperature is shown by an experiment; a specimen of milk which had been standing four days in a cold place was found to have about 10,000,000 bacteria per quart. The milk was then allowed to stand in a warm room seven hours, and during this time the bacteria increased a hundredfold. From this it appears the most effective method of preventing milk souring is to keep it cool. Milkmen sometimes find the morning's milk in summer sours before the milk of the previous night. It is easy to see why this happens. Milk when drawn from the cow is at a temperature best adapted for bacterial growth. The morning's milk, however, is poured directly into the cans and the bacteria which have entered it are well started upon their growth before the night's milk is warmed by the air. The bacteria in the morning's milk actually

get several hours' start, therefore, of those in the cooled milk of the night before. The immediate cooling of milk is thus of great advantage in preventing its souring.

There have been found no less than between forty and fifty different species of bacteria in normal milk and cream. This large number is due to the fact that milk may collect almost any kind of bacteria that may be floating in the air. The individuals of most of the species are few in number and ordinarily are of little significance. A few species are almost universal and extremely abundant.

Different effects of the different species—Souring of milk.—Many of the species cause curdling of the milk. Some of them do this by the production of an acid, and the milk sours. Others curdle the milk apparently by producing a ferment like that in rennet, in which case the curdled milk may not be sour. When a curd is formed it differs in character with the different species. Accompanying the curdling various odors are found, among which may be recognized odors of the cow, the barn-yard, and even the pig-sty. The souring of milk is thus more complex than has been supposed; and while it depends upon the action of bacteria, any of a number of species, or several combined, may be the cause.

Though the presence of bacteria is a nuisance to the milkman it is of positive advantage to the butter maker. The ripening of cream undoubtedly depends upon the presence of bacteria, though it is doubtful whether any one species can produce what is known as ripened cream. Ripened cream contains immense numbers of bacteria. Over 100,000 have been found in a single small drop. Dairymen let their cream ripen before churning, because their experience tells them the butter separates ("comes") more readily, has a better flavor, and perhaps keeps better. A plausible explanation of the first fact is that the bacteria break up the albuminous matter connected with the fat globules, so that these globules are more easily separated from it and more easily shaken together into large lumps. The products of decomposition usually possess a prominent odor and taste and their presence in the cream probably gives the special flavor to butter made from ripened cream. Pure butter fat is tasteless.

Practical conclusions.—Three important points in the handling of milk and cream are brought out by these considerations:

1. The importance of keeping milk so far as possible free from bacteria by the exercise of the greatest cleanliness:

2. The importance of cooling milk immediately after it is drawn from the cow in order to prevent the souring as long as possible:

3. The advantage of keeping cream under circumstances favorable to the growth of bacteria that induce ripening:

As cold retards and heat, up to a certain limit, favors the growth of bacteria, the advantage of keeping milk cold and cream warm is easily explained.—*From the U. S. Dept. of Agric. Farmer's Bulletin, No. 2.*

A Reliable Purgative Enema.—The following enema has proved so reliable and satisfactory in my hands, that I feel it is worthy of a brief note:

℞ Sulphate of magnesia, 2 ounces.
Glycerin, 2 ounces.
Oil of turpentine, ½ ounce.
Water, 2 ounces.

M. Label, "To be used as an enema."

To move the bowels after abdominal section, or after plastic operations on the female pelvic organs, it has been in constant use for many months. When used alone it has moved the bowels, as a rule, promptly; and has been equally effective when given as an adjuvant to some cathartic taken by the mouth.

Prior to the employment af this formula, I had used the simple enemata of glycerin, and of glycerin and turpentine, which are distinctly inferior to the one above recommended.

The combined action of Epsom salts, turpentine, and glycerin is very effectual, not only in evacuating the rectum, but also in getting rid of flatus, which is the cause of much of the pain present after abdominal section.

I have had the opportunity, upon two occasions, of testing the activity of this enema in cases of threatened obstruction of the bowels, following operation. Other measures failing—including purgatives and large and small enemata—I have introduced a long, soft tube up the rectum, and given this enema into the descending colon, with the happiest results.

Now that the use of opium has been banished from the after-treatment of cases of abdominal section, this enema has, in my hands, become the great anodyne.

When given through the rectal tube, its employment promises much in cases of partial obstruction of the bowels, also in obstruction due to paralysis of the bowel.

The enema is best given through a hard-rubber piston syringe.—Charles P. Noble, M.D., in *Medical News.*

The Medical Age.

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Original Articles.

ADVANCES IN SANITATION.*

BY U. O. B. WINGATE, M.D.†

With the treatment of disease, the sanitarian, as such, has nothing to do, yet he who would advance in a scientific way in prevention or in treatment must first become familiar with the ætiology of disease.

When Dr. Robert Koch, of the Imperial Board of Health, Germany, first announced the discovery of the tubercle bacillus, which is now almost universally recognized as the principal cause of tubercular diseases, there was a stir in the medical world; but later, when he intimated a cure of this disease had been discovered, and before he could work out the idea to his own satisfaction, there was generated a cyclone which threatened to be about as disastrous in the medical profession as such an element usually is in a locality that is unfortunate enough to experience its presence. Does any one suppose that had a preventive been announced, such unusual interest would have prevailed? This somewhat peculiar experience in our modern civilzation is not without its lessons, and it teaches us one important truth, viz., there is a greater tendency on the part of a portion of our profession to seek a cure than to seek prevention. The world, even the medical world, apparently, has not yet fully learned that 'an ounce of prevention is worth a pound of cure. Undoubtedly the influence of the public mind has a tendency to stimulate members of our profession, dependent as they are upon the public for their bodily sustenance and support, to rush after any new claim for a cure rather than to give more attention to prevention. Nevertheless, advance in sanitation during the past year has gone steadily on; perhaps it has not been made as conspicuous by the votaries as have some other departments in our profession, yet it promises to be as lasting and valuable in its results.

Since the advent of the germ theory of disease, the whole system of preventive, as well as of other departments of, medicine has been steadily undergoing a marked change. To the student of bacteriology the sanitarian, as well as the surgeon and practitioner, looks for the fundamental principle of his system. To enter into the details of progress made in bacteriology during the past year, would require more time and space than would be profitable in this paper, did I feel able to review the subject in a deserving manner. There have been, however, marked advances of such great importance to the sanitarian that I cannot refrain from briefly referring to some of the more prominent.

Until quite recently, the constant presence of a germ in disease was thought to be sufficient to establish a cause, but recent advances have shown the fallacy of such an idea. We now know, and it has been demonstrated by a large number of reliable observers, that the germs of various diseases are more or less constantly present in the human system, and may be found in varying numbers during the different conditions of health. Experiments made by Dr. H. P. Loomis seem to show that we may carry about with us the germs of tuberculosis for a long time, and not be victims of the disease. He examined the bronchial glands of forty-eight persons, dying from accident or from acute diseases, and found that by inoculation with the contents of these glands he could produce tuberculosis in quite a number of cases.

Whether diphtheria is a specific disease, and caused by a specific germ, is a question which is at the present time vigorously disputed, and it is a fact that the bacillus dis-

* Read before the Wisconsin State Medical Society, June 3d, 1891.

† Commissioner of Health of Milwaukee; Chairman of the Committee on Hygiene.

covered by Löffler has been repeatedly found in the mouth and fauces of the healthy individual, and in cases where the disease (diphtheria) has not developed. Germs, supposed to be the causes of other diseases, may be similarly found in healthy individuals, which fact is leading bacteriologists to go a step further than the presence of the organism to explain the cause of disease. A short time ago, the presence of the bacillus tuberculosis in the sputa of a patient was thought to be proof positive that the patient was the victim of pulmonary tuberculosis; but now we know that the bacillus tuberculosis may be found in the sputa expectorated from a perfectly healthy being, and that symptoms other than those found by the microscope must be taken under consideration to arrive at a correct diagnosis. The fact that these germs may be taken into the system with impunity, under certain conditions, has led to a series of experiments which has not advanced to an extent to give us positive knowledge. The relation of chemical factors produced by the presence of these organisms, their contact with other germs, and with varying conditions produced by different stages of tissue metamorphosis, which, in some way, produce the long list of ptomains and leucomains, are questions which have not as yet been settled.

It seems to be quite well established, or at least it is highly probable, that a few of the infectious diseases, such as anthrax and tuberculosis, which have such well-marked typical clinical histories, are due, under certain conditions, to equally well-marked or morphologically distinct micro-organisms. But there are good reasons to suspect that many other diseases, such as typhoid fever, diphtheria, scarlet fever, cholera-infantum, and the like, are not caused by the presence of any one germ, or, in other words, that the presence of a germ constantly found in these diseases is not the sole and sufficient cause of the disease.

An interesting suggestion is presented by the fact that Löffler and other German observers have shown, in the majority but not in all cases of diphtheria, the presence of a specific bacillus, which they have been inclined to believe the sole cause of that disease; while, on the other hand, Prudden of New York, and others of this Country, whose accuracy and honesty in observations none can question, failed to find the Löffler bacillus, but did find a wholly different organism. What is the meaning of this? Is it possible that there is a difference in the morphology of the germ, thought to be the cause of diphtheria in Germany, from that which may cause the same disease in America? Have we learned everything concerning the morphology, even, of these micro-organisms, and if we have, may we not have much to learn in regard to their functions, relations, and actions under different conditions? We are all familiar with the very marked difference which exists in the functions and relations of other living organisms from the human family down; is there not reason to suspect that similar differences may exist in the lives of these minute organisms which we have so recently commenced to study under the powerful lenses of the microscope?

To the thoughtful physician and sanitarian, the progress in bacteriological study will receive earnest, but careful, consideration, and conclusions will be drawn in a somewhat conservative manner.

That we are, at the present time, entering an era of profound interest to the scientific physician, and to the human family, no student of modern attainment can doubt, but, in our zeal to advance, the tendency to draw conclusions from insufficient evidence must ever be kept in mind.

The fundamental principles of sanitation, "pure air, pure water, and pure soil," as laid down by Hippocrates more than two thousand years ago, furnish the modern sanitarian with prodigous work.

Medical science, sanitary as well as otherwise, is not a fixed science which can be demonstrated by a mathematical equation; it has to deal with human life which is a growth, and which, together with its environments, is subject to constant change. From a sanitary point of view, different communities, like individuals, require different treatment; what may be required for one may not answer for another. Hence each community, like each patient of the physician, becomes a study by itself, and must be treated according to the conditions in which it exists, and the environ-

ments that influence it. This fact is not well understood by the public, and too often the sanitarian has to contend with the idea that what may be the best sanitary methods to adopt in one place, are applicable to any other place or locality.

The question of municipal government is one which affects and interests the sanitarian very much; for an illustration, we may compare the two cities of Bermingham and Manchester, in England, the histories of which are more or less familiar to almost everyone. Both are manufacturing cities, of about equal population, not dissimilar as to location or character, yet the annual death-rate of Birmingham is 18 per thousand, while that of Manchester is nearly double that number. Birmingham has the advantage of a well disciplined municipality; it has been governed for years by scholars in municipal government, and its sanitary administration has been in harmony with the municipality. Manchester, unfortunately, has not possessed such advantages. An important subject, indeed, in our own State is, that of the relation of municipal government to sanitary administration. We are living in a young state; our cities and villages are growing; and the importance of wise sanitary laws to prevent the evils which have befallen older cities, and which are so easy to prevent in the earlier growth, should stand second to no consideration. The best system of drainage; the construction of sewers and plumbing; the construction of vaults, if allowed to exist at all; the location of wells; the water and milk supply; all these should receive the earnest attention of every citizen. Properly warmed and ventilated houses and public buildings may have much to do with the prevention of many diseases, and especially that disease which stands at the head of the list in the death record nearly all over this country,—pulmonary tuberculosis, or consumtion. Encouraging, indeed, is it to read the following words written on a very recent date by one of our advanced sanitarians:

It is quite evident that the medical world has fairly entered upon its grandest undertaking, to wit, the stamping out of consumption. It is also evident that it has entered upon this Herculean task with a zeal, patience, and knowlege which insures success at no distant period.

For nearly fifty years the theory of Laennec was dominant in the medical world, namely:

In almost all cases of pulmonary consumption the disease depends on the spontaneous development of tubercles which run their course to the destruction of the lung, little, if at all influenced by the art of medicine.

And the popular opinion that neglected colds led to consumption was said to be nothing but a vulgar error. Now we can see that the popular idea, though the reason for its existence was not well established, was nearer right than was supposed. We cannot now fail to recognize that certain inflammatory and depressed conditions, caused by exposure to insufficient and improper heat and ventilation, may furnish the best possible conditions for the admittance and action of the tubercle bacilli. No doubt much can be done to prevent this disease by properly isolating and caring for patients thus affected, but much more can be done by the proper construction of the homes in which we live in order that the system may be kept in such condition that the bacillus becomes powerless when taken in to it.

There is a popular belief, and perhaps it exists in our own profession, that filth plays an important part in the causation of disease; most sanitarians do not admit that filth of itself ever produces disease. That it furnishes the best media for the growth and propagation of disease germs there is no doubt, but in itself it is not a cause of disease. The removal of filth is necessary for good sanitation, but the prevention of the introduction of infectious diseases, the isolation of the sick, disinfection of houses, clothing and other infected material, all these must be carefully attended to as well as the removal of filth.

One of the most important questions which has received a large share of attention during the past year is the disposal of sewage. The idea that the application of sewage to land, either before or after some method of treatment, is the best means of disposal seems to have made much advancement of late. In a valuable address before the last annual congress of the sanitary institute of

Great Britain, the president, Dr. G. Vivian Poor, advanced an important idea in regard to the value of the living earth to sanitarians; he pointed out that on top of the earth the first three to six feet of soil are very rich in saprophytic bacteria, and can well be called the living earth; that below three to six feet the earth is barren of life. Anything deposited on the top of the earth soon disappears; even the toughest articles, such as leather and wood, soon become softened and destroyed. He showed it has often been demonstrated that below six feet the earth contains nothing as a barrier against filth contamination. This has been well shown in large towns where wells invariably become contaminated, and it is daily demonstrated that rivers near large towns are always contaminated. The earth first becomes saturated on the river-sheds and the filth soon finds its way by natural courses into streams in near proximity.

No more productive cause of this earth contamination can be shown then that produced by privy vaults, which abound in many cities and towns without any sanitary regulations as to construction. They are simply holes in the ground without any attempt to make them water tight, and they are often deep enough to reach below the living earth where their contents meet no life to combat the contamination, and in a few years the earth becomes saturated with a most dangerous contamination. It is a false notion that the earth can care for this filth below three to six feet. This process taking place in the living earth is explained by the fact that filth on the top part of the earth becomes food for this host of saprophytic life, and is rapidly consumed. These changes are usually in the direction of oxydation, occasionally the change is one of reduction. One thing is certain; if the earth be sterilized by heat or other means, it is no longer capable of producing chemical or other changes in organic matter. The important factor, in keeping this living earth active and valuable as a scavenger, is tillage. Dr. Poor lays stress on the following statement which should be emphasized in all parts of the world, viz:

Well cultivated soil which is compelled to produce good crops has never yet been convicted of causing any danger to health.

In our rural districts the question of sanitation, therefore, is closely related to agriculture.

That the drainage of our cities and towns into sewers and lakes, as well as into seas or oceans, is unnatural and unsanitary, seems to me to be fast forcing itself on the minds of all who have given the subject careful thought. Engineers and sanitarians appear to hold somewhat different views on this subject, but recent observations seem to show that the sanitarians are gaining ground. Many engineers have questioned the safety of employing, as a fertilizer, the human excreta in sewage, and for this reason have maintained that its discharge into the water courses was the best way of disposal. It is now maintained that, with the exception of Pasteur, and Dr. Hope of Liverpool, no English, French, or German, sanitary authority, holds this opinion. The works in Berlin, Germany; Gannevillers, France; Birmingham and other places in England; and Lawrence, Massachusetts, which are utilizing sewage on the land, are fast convincing engineers of the practicability of this method. In our own cities, if I may be pardoned for offering advice, I know of no more important step for the members of this society to take, than to urge to the utmost of their power the abolition and prohibition of draining into streams and lakes.

Closely connected with this question of disposal of sewage, and earth contamination, comes that important sanitary question, the disposal of the dead. When we take under consideration that, according to statistics, 47,000,000 of people die every year; that to each one of these 47,000,000 must be allotted 2x6 feet of ground, making a total of nearly twenty-one square miles of earth surface each year taken up for burial purposes; and, with the rapidly increasing population of the world, we must concede the question of the disposal of the dead becomes one of enormous importance to the living. Experiments have shown that burial is one of the most dangerous practices of modern times. For instance: Pasteur buried the body of a sheep that had died from charbon, twenty feet beneath the

earth's surface, and after a lapse of ten years allowed a flock of healthy sheep to graze upon the ground about the grave; the result was death by charbon to all the flock. This one instance, perhaps, would prove nothing; but connected with other investigations, as those of Koch, Carpenter, and Everts, all of which have given similar results, it becomes one of great importance for us to consider. Numerous chemical examinations of dead animal tissue, in various stages of decomposition, have shown that germs do not die with the body, but thrive and multiply in the decomposing carcass, and are transmitted to the earth's surface by earth-worms, and are then ready for new victims. Is it not possible, at the present state of knowledge, for us to reasonably conceive that the germs of yellow fever, typhoid fever, tuberculosis, diphtheria, and the like, must come to us many times? Numerous instances are recorded where the upturning of the ground in burial places has given rise to fatal sickness and epidemics. It has also been well authenticated that rivers or streams in the vicinity of graveyards are very apt to cause sickness of an epidemic type; in such instances the disease germs migrate from the bodies of the victims to the water, and some may be carried there by earth-worms. Nor does the danger of burial end here. The earth and the water do not receive all the contamination; the atmosphere gets its portion. Says Sir Henry Townsend, the well known English authority:

No body is ever placed beneath the soil without polluting the earth, the air, and the water, above and around it.

I cannot well understand how any sanitarian or physician can withhold his condemnation of this deleterious system, nor refrain from urging that it be abandoned.

That cremation is the best sanitary means for disposal of the dead, there can be no doubt, and it is gratifying to see the advancement in this direction. The first crematorium of modern times was erected in Milan, Italy, in 1880, and during about a decade we find that forty-two crematoria have sprung into existence. The objections which exist to this system are deeply rooted in the minds of the people, and can only be overcome by degrees, and earnest appeals to the intellect and reason. There are but two principal objections — one based on sentiment, the other on religion; a tender attribute and a delicate element, indeed, in human existence, to contend with.

When one will study and observe the construction and working of a modern crematorium, and compare it with the process which must take place in a body buried five feet underground, it is difficult to understand how one can object to cremation on any ground of sentiment. Perhaps the greater objection is that based on religious belief. The objection raised, that by cremation the body is destroyed and cannot be resurrected, should be met by natural science, which teaches that nothing can be destroyed by any agent which can be manipulated by man, and by the fact that precisely the same process takes place in the grave, in from twenty to one hundred years, that is accomplished by cremation in the short space of two hours.

A question which properly is a part of sanitary reform in municipal government, and one which has received some attention during the past year, and is bound to receive more in the near future, is that of prostitution. The most able paper that has been written within the last decade, to say the least, on this subject, is that by Dr. Theiry of Brussels, read before the International Medical Congress at Berlin last August, in which he says:

Prostitution is not only due to moral depravity, but principally to a physiological function that is absolutely dormant at a certain age. Whether desirable or undesirable, it is a necessary evil; its excess may be repressed, its dangers limited, but it cannot be extirpated. This necessary issue of human passion should be under surveillance, and registered, like food, sewers, and collections of filth, to which Parent Duchalet compares it. Inspection is the sole way to protect prostitutes and those who use them from disease. In certain countries it is ignored, on the fallacious theory that it antagonizes liberty and the dignity of women. What is the liberty that exists to the prejudice of public health? And is not the woman always free to abandon her vocation? Another error is to regard prostitution as a crime.

The following propositions were submitted:

1st. The regulation of prostitution is neces-

sary to restrain the propagation of venereal and syphilitic diseases:

2d. Prostitution that attracts attention by the frequenting of streets, promenades, and public places, being the most powerful cause of propagation of venereal diseases, should be forbidden:

3d. Women who are known to live habitually as prostitutes, should be registered and given sanitary visits:

4th. The registration and sanitary visits should be authorized under the safeguard of guarantees that should always and everywhere protect the honor and dignity of the individual:

5th. The sanitary visits should be frequently and conveniently made.

The prevention and control of the more common infectious diseases have been subjects more or less under consideration in all parts of the civilized world, during the past year. Most of the advances made have been based on the idea of germ causation. Whether these are specific germs which cause disease, or whether disease is caused by the army of ptomaines, chemical products or what not, it seems to be well settled that the germ must be a potent factor, at least, in the causation, hence war on the germ seems to be the duty of the sanitarian.

To stamp out certain diseases such as diphtheria, scarlet fever, etc., the idea of isolation hospitals and more thorough disinfection seems imperative. Here the health officer finds much difficulty in as much as the public mind is not educated up to the importance of such steps. To remove a child from its home to a hospital, should such an institution be at hand, flavors of interfering with personal rights, a dangerous thing to meddle with in this country; yet it is becoming more and more evident to physicians that such a course must be persued in order to successfully combat these diseases.

Public disinfection chambers are being established in Paris and other parts of Europe, and better and more thorough means of disinfection are beginning to be inaugurated in our own country. That diphtheria must be longer isolated in order to do anything by way of its prevention, is evident to all who have studied the disease from a modern standpoint: It seems to be the opinion of the best sanitarians at present that the shortest time to be observed in the isolation of this disease, in order to be safe, is twenty-eight days.

The effect of meterological influences in the causation and promulgation of influenza and pneumonia is a question which is receiving much attention, and one of great importance. Much valuable research may be expected in the near future. It has been recognized as a fact that influenza travels slowly in Siberia and Russia, but rapidly as soon as it reaches regions where railroads and other means of rapid travel are numerous. This would indicate that, like other diseases which we consider infectious, it depends largely on the contact of individuals for its promulgation facilitated by rapid transit. The Secretary of the State Board of Health of Michigan, Dr. Henry B. Baker, claims that he has discovered the cause of this disease, and offers an ingenious theory. He believes the germs of influenza are generally at all times present; that the germs of pneumonia, tuberculosis and other specific diseases (as he terms them), are somewhat widely disseminated; but that there must be certain coincident meterological conditions to irritate the air passages sufficiently to let the germs gain an entrance to the body; these meterological conditions in this instance are the excessive prevalence of North and North-east winds in certain seasons, and the excessive amount of ozone generated during such periods. Although this theory has not yet been verified, it would seem to demand careful attention.

Funeral reform, and celebration of certain days at certain seasons and during inclement weather, are subjects which are receiving some attention, and will receive more in the future. How often, in the experience of almost all of us, a severe illness, and too often a death, can be traced to exposure by attending a funeral, or some public celebration, and being a long time subject to cold inclement weather by a long ride in a slow procession. While we would do reverence to the dead under all circumstances, and honor to all proper days of celebration, we should not forget the duty we owe the living.

Once more during the past year has the old tirade against vaccination been raised.

About once in so often do we have to meet this argument, and it must be met in an intelligent manner in order to prevent its doing much harm. It would appear by the reports that we have received from the English Royal Commission on Vaccination, which is investigating this subject, that the believers in vaccination have nothing to fear, and that the same old story is being reiterated by the anti-vaccinationists which can be described in the following words, viz.:

Insufficient reasoning from insufficient data.

There are many other subjects to which one might refer at this time which are of more or less importance, and which are receiving attention from sanitarians; among them may be mentioned the influence of literature on the general health, more especially the sensational newspaper reports of suicide and crime of various kinds, and its influence on mental hygiene. The prevention of smoke nuisances, which has made rapid strides of late. and the possibility of air filteration, so as to render it germ-free, for hospitals and other public buildings.

To Germany and England must we look for much advancement in sanitation, and especially to the former, where eighteen of her twenty most prominent universities of learning are provided each with a professorship of hygiene, and some of them with more than one professor. Among these men we find the most prominent in the profession, such as Koch, Finkelaburg, Fligge, Löffler, Pettenkofer, Uffelman, Lehman, Hoffman, Gärtner, and others.

The indications of sanitary advancement in our own Country are usually encouraging at the present. All along the line we may observe a tendency on the part of enlightened communities to advance. To our older states we naturally look for the advance guard, and in Massachusetts we observe its Board of Health continually making marked progress. There is, in that State, in contemplation, the appointment of a salaried inspector, whose duty it shall be to investigate and report on the causes and conditions of local epidemic outbreaks, as has been done by such men as Ballard, Buchanan, Thorne, and Radcliffe, in the service of the English Local Government Board. In New York, we observe the valuable work done by the Ladies' Health Protective Association, an organization which in the past two years has taken action with regard to gas houses, slaughter houses, stable refuse, street cleaning, public sewers, school hygiene (one of the most important subjects of the day), tenement houses, public water supply, the appointment of women as inspectors of factories, and as police matrons.

Our medical schools are fast learning they are incomplete without a chair of hygiene, and with such a course as is now given at the Johns Hopkins University, with a few such men as Mr. Henry C. Lea, of Philadelphia, who has recently given $50,000 for the erection of a building for hygiene at the University of Pennsylvania, and with a Secretary of Public Health in the Cabinet of the President of the United States, as was so wisely recommended by the American Medical Association at its last meeting, we may well expect to see in our Country rapid and valuable advances in sanitation.

Milwaukee, Wis.

HIP ABSCESS WITH A NEW CLASSIFICATION.

BY JAS. K. YOUNG, M.D.

Hip disease may run its entire course without suppuration, either extra- or intra-articular, the process being a *caries sicca*, a non-suppurative osteitis, but, as a rule, abscesses are a frequent and serious complication. The presence of pus indicates the destructive character of the osteitis, though extensive collections may spontaneously undergo caseation and absorption without much destruction of tissue, a "residual abscess" resulting. They occur but rarely during the onset, but may be the first symptom to attract the attention of the parent or the patient to the affected part. They are characteristic of the second stage, and occur, according to Lannelongue, from the sixth to the fifteenth month, though they may be much later. According to Lovett and Goldthwait, of all the [63] cases examined with reference to this subject, abscess occurred within one year in 59 per cent., within two years in 13 per cent., in three to five years in nine cases, and in the seventh and ninth year one each. The frequency appears to be directly influenced by the efficiency of

appropriate treatment, and the stage during which it is begun. Thus, the percentage of abscesses occurring in the series of cases collected by Gibney, Marsh, the Clinical Society's Committee, and Lovett and Goldthwait, is from 23 per cent. to 69 per cent., of which from 41 per cent. to 50 per cent. developed before the patients came under treatment, and Mr. Marsh estimated the formation of an abscess may be averted by early treatment in at least 80 per cent. of the total number of cases. The origin and course of the abscess will depend upon the location and extent of the tubercular focus. From an epiphiseal osteitis the pus may extend in a course outside of the joint and become extra-articular; so, also, an extra-articular abscess may invade the joint. Suppuration in hip-joint disease coincides, in general features, with cold abscesses from osteitis elsewhere. The advent is usually without constitutional disturbance, but slight evening rise of temperature, slight rigors and perspiration, may mark its progress. The complexion is pallid from the increased number of white blood corpuscles in the blood,—suppurative leucocythæmia,—the appetite is capricious, but otherwise the general condition may be but little affected. Locally, the abscesses follow the fascias and seek exit in the direction of least resistance, opening at some distance from the seat of disease, accumulating, in some instances, until they assume enormous proportions, or burrowing to great distances. The abscesses may open in many places, as in the case of Mr. Lund, in which there were no less than twenty-one different openings. The course and exit depend upon the location of the original disease, and attempts have been made to classify the different routes followed by the suppuration and utilize the knowledge for diagnostic purposes. While the pointing is significant, it is not a positive indication.

Three varieties of abscesses may be distinguished, based upon the primary lesion: Arthritic, femoral, and acetabular. Suppuration, according to Ashhurst, occurs earlier in the acetabular than in the femoral variety.

In the arthritic variety, according to Bonnet, if the head of the femur does not press specially upon any part of the capsule, the pus will find exit at the inner side, the weakest spot of the capsule, and point at the inner side of the thigh among the adductors. If the limb be adducted and rotated outward, the head of the femur presses against the anterior and inner part of the capsule and gives way at that point. In this event the pus enters the sheath of the psoas and iliacus, simulating a psoas abscess, or burrows downward toward the inner side of the thigh. If the limb be adducted and rotated inward, the pus escapes at the posterior part of the capsule, to enter the pelvis along the course of the sexual rotators, or what is more common, points below the gluteus maximus.

In the femoral variety they open directly into the joint to terminate eventually as the arthritic abscess before given, or escaping from the bone open upon the outer or anterior aspect of the thigh. Ashhurst says an abscess opening upon the outer part of the thigh, below the trochanter, indicates disease of the caput femoris, and Erichsen describes abscesses which burst below and in front of the great trochanter as indicative of disease of the femur.

In the acetabular variety, owing to the peculiar anatomical relations, purulent collections vary much in their course and exit. They may burst through the capsule and point in the inguinal region, or perforating the pelvis may pursue a circuitous route before being eventually discharged. Ashhurst says that abscesses opening in the pubic region denote disease of the acetabulum—the abscess being intra- or extra-pelvic according as it opens above or below Poupart's ligament. Erichsen also considers pubic abscess pointing above Poupart's ligament due to pelvic disease on its inner aspect. Wright concludes that when an abscess points on the front of the limb above a line drawn through the upper border of the great trochanter, there is disease of the pelvis, and this is the more certain the higher and the more internal the opening.

In the acetabular variety, in pelvic accumulations from perforations of the acetabulum, the pus (1) traverses the internal obturator muscle to become a gluteal abscess; (2) fills the internal iliac fossa, and becomes a pubic abscess; (3) burrows through the external obturator muscle to become an internal crural abscess, or; (4) opens internally,

traversing the obturator internal muscle to open into the peritoneal cavity, the rectum, urethra, bladder, vagina, and upon the skin at the margin of the anus. According to Wright, abscess pointing between the scrotum or labium and the thigh, is always of serious import, indicating pelvic disease. Gluteal abscesses, as pointed out by both Ashhurst and Erichsen, may be due to disease of either the femur or acetabulum.

VARIETY.	COURSE.	EXIT.
1. Arthritic..	a. Through inner side of capsule.	Inner side of thigh among adductors.
	b. Through anterior and inner side of capsule.	Enters sheath of psoas and iliacus, and burrows to inner side of thigh.
	c. Through posterior part of capsule.	Along course of external rotators or below gluteus maximus.
2. Femoral...	a. Directly into joint.	As in arthritic variety, upon outer or anterior aspect of thigh below the trochanter.
	b. Outer or anterior course.	
3. Acetabular	a. Through anterior part of capsule.	In inguinal region below Poupart's ligament.
	b. Perforates acetabulum:	
	1. Through internal obturator muscle.	As gluteal abscess.
	2. Fills internal iliac fossa.	As pubic abscess.
	3. Perforates external obturator muscle.	As internal crural abscess.
	4. Into peritoneal cavity.	Into rectum, urethra, bladder, vagina, and at verge of anus.

Though possible, it is rare for purulent accumulations to be absorbed after they have acquired certain volume. When the pus reaches the surface, it appears as a tense fluctuating swelling, of uniform color, with prominent superficial veins. When pointing occurs, the skin becomes red, thin, and ulcerates in one or more places. These, if small, readily heal after the exit of the pus; they break down into large tuberculous ulcers, or remain indefinitely as orifices of sinuses or fistulæ filled with exuberant granulations. These fistulæ afford some clue to the seat of the disease, but cannot be readily explored on account of the tortuosity of their course. Fistulæ, originally pelvic, are distinguished, as pointed out by Barwell, by bearing-down efforts of the patient, causing the escape of purulent liquid.

222 South Sixteenth St.,
Philadelphia, Pa.

THERAPEUTIC USES AND VALUE OF CAMPHO-PHENIQUE AND CHLORO-PHENIQUE.

BY BEVERLEY D. HARISON, M. D.

Some months ago my attention was drawn to two new remedies placed upon the market under the names of campho-phénique and chloro-phénique. Having procured samples I have given both a thorough and extended test in my public and private practice, and it now affords me very great pleasure to add my testimony to that of so many others, to their value in practical therapeutics.

As parasiticides and antiseptics they are, in my experience, without rivals. Of campho-phénique, I can say that it would be difficult to enumerate all the diseases and conditions in which I have found it to be "just the thing." Undiluted, as a dressing for wounds, burns, scalds, etc., I have found it more truly and reliably antiseptic and anæsthetic than any other agent with which I am acquainted.

In dermatology, in the majority of cases, it is superior to iodoform or aristol.

It is the ideal antiseptic in the treatment of diseases of the throat and nose. Especially is it useful in catarrhal conditions of the fauces, used either as a spray or by inhalations. In gynæcological practice it is also most valuable.

As a non-toxic, non-irritant, and reliable germicide for washing out the cavities, chloro-phénique has no equal. I have used it in several cases of chronic cystitis, washing out the bladder thrice weekly, with a 25 per cent. aqueous solution, and in each case a cure was speedily effected, although they had previously been treated without much benefit with boro-salicylic lotions, permanganate of potash, nitrate of silver solution, etc.

In dressing wounds, burns, etc., I have used chloro-phénique gauze (made by saturating cheese-cloth with chloro-phénique), and I have found the dressings more surely antiseptic than any gauzes on the market, beside being entirely non-irritating.

In the treatment of two cases of typhoid fever, with excessive tympanitis, I injected chloro-phéneque well up into the colon (using a stomach pump for the purpose), the result being a rapid reduction of the tympanitic condition.

Finally, I have used chloro-phénique successfully as an antiferment in dyspepsia, and as an injection in gonorrhœa—healing *tuto, cite ad jucunde.*

Sault Ste Marie, Mich.

ARISTOL IN CHRONIC DYSENTERY.

BY B. M. RANDALL, M. D.

Among the numerous applications of aristol brought before the profession by the journals, I do not remember noticing any reference to its use in chronic dysentery, and I was led to a trial of it by theoretical reasoning, coupled with sheer desperation, in a case where vitality was fast ebbing and all regulation treatment seemed to fail. My experience with this remedy in chronic dysentery is confined to three cases, but the evidence of its virtues has been sufficiently marked to excuse bringing it to the attention of those who are having difficulty with this intractable disease. I will briefly submit notes of my worst case:

P. B., æt. about 60, came under my care May 15th, 1891. Had been a hard working blacksmith, but was incapacitated for about six months. Confined to bed for six weeks, steadily growing worse. Operations averaged not less than once an hour, accompanied by great pain and tenesmus, and the passage of large quantities of blood. The location of pain and tenderness would indidicate involvement of the lower half of the transverse colon in the ulcerative process. Emaciation extreme. A twenty grain suppository containing three grains of aristol, and one-third grain of morphine was directed three times a day, and the dietetic regimen enforced. Two days later stools were less offensive, more consistent and free from blood. Within one week pain and tenderness were entirely gone, blood had slightly reappeared but once, operations were six to eight *per diem*, soft but not fluid, and almost free from epithelial debris. Occasional colicky pains occurred from tympanites, but yielded to a carminative. In ten or twelve days all evidence of rectal ulceration had about vanished and the aristol was reduced to one grain three times daily, morphine being used only in the evening. June 4th the patient was apparently convalescent and calling for more food. Tongue becoming moist and fissures disappearing.

Full reference is not made to the medicinal treatment, for no practical change was instituted, even in the matter of the opiate. Injections had previously been used, both of cold water and of mild alum solution. It is simply desired to call attention to the influence of aristol upon the ulcerated condition of the lower bowel, evidence of which is corroborated in the two less notable cases to which I have alluded. Where an extensive portion of the colon is involved in the ulceration, suppositories would hardly be expected to meet the indications, and a suspension of the powder in fluid might be suggested.

Graceville, Minn.

RAPID PROCESS OF EXAMINING STOMACH JUICES.*

It has long been known that chemical action in the stomach is principally responsible for the morbid phenomena often found. The difficulty of obtaining the stomach juices for comparison has been great. Günsburg's process is as follows:

One hundred grammes of bread and a glass of water are given at 7 o'clock in the morning.

At eight o'clock a capsule of iodide of potash is taken.

At a quarter of an hour after, and at every one-quarter hour, the patient spits a little saliva into a glass for examination.

At eleven o'clock, tests for the detection of iodine are made with starch solution, which, if iodine be present, will show a blue coloration.

When the stomach is in a normal state, iodine will be found 1½ hours following the ingestion of the capsule.

With an over-abundance of hydrochloric acid, the reaction is produced three-quarters of an hour or one-half hour after the ingestion of the capsule.

With a less than normal amount of hydrochloric acid present in the stomach, the reaction is delayed, and does not appear until two to five hours after the ingestion of the capsule.

The capsule is made as follows: 0.20 centigramme of iodide of potassium is placed in a little caoutchouc tube. The ends of the tube are bent over upon themselves and tied with three pieces of fibrin threads.

* Translated from Journal de Medecine by W. H. Hubbert, M.D.

Correspondence.

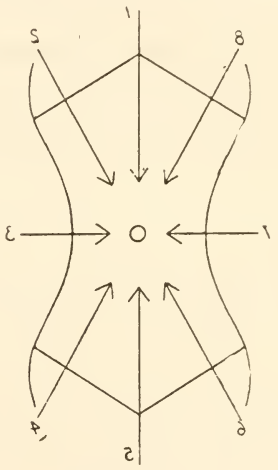
FOREIGN CORRESPONDENCE.

BIRMINGHAM, ENG., May, 1891.

This city, of nearly half a million inhabitants, has not, so far as Americans are concerned, a reputation of being a great medical center, but is situated among the hills, in what is known as the "Black Country." During a course of six months with Mr. Lawson Tait, I have had good opportunity of observing considerable surgical work in Birmingham. The profession extended me the utmost kindness, and their courtesy is a matter of pleasant memory. I followed the surgical work of Mr. Bennett May and Mr. Marsh for months. Both these general surgeons took special pains to demonstrate to me their methods, and show patients who exhibited good results. Mr. J. W. Taylor and Mr. Malins, gynæcologists, kindly invited me to witness some of their operations, and to inspect their work.

In this letter I will speak of Mr. Jordan Lloyd, another of the bright lights of Birmingham. Mr. Lloyd is not yet forty years of age, but a brilliant surgeon of much promise, and a skillful and rapid operator. He is a clear-headed genius, and a most remarkably systematic teacher of positive character. Mr. Lloyd is a general surgeon, but does some excellent abdominal work. In his short, pointed, clinical talks, he uses ingenious contrivances to forcibly illustrate his views. Herewith I give one of his diagrams, which he sketched off on the black-board as a simple, but quite valuable, means of analyzing and differentiating all forms of abdominal tumors. With scarcely an exception, all abdominal tumors grow toward the umbilicus. This diagram is founded on the origin of their growth, and their tendency to move toward the navel. All abdominal tumors grow in the direction of the least resistance, and the point of least resistance is around the umbilicus.

This is a very suggestive figure. One of the first things in diagnosing an abdominal tumor, is to locate its origin, because that gives a clue to its nature. This also brings in the subject of anchorage of abdominal tumors. One can frequently diagnose a large elongated gall bladder by observing how the tumor moves about on the axis of its own pedicle; the gall bladder tumor can be moved laterally, and up, but not down.



Lloyd's Diagram to show origin and direction of Abdominal Tumors. Arrow No. 1 indicates tumors which originate in liver and stomach and move toward the umbilicus: No. 2 shows origin and direction of splenic tumors: Nos. 3 and 7, of the kidney: Nos. 4 and 6, the direction of ovarian (and tubal) tumors: No. 5, origin and direction of uterine tumors: No. 8, tumors of gall bladders.

The principles suggested in this diagram can be employed in a variety of ways. It is hopeful to me to see any improvements or advance in the subject of diagnosing abdominal tumors, especially at the present high tension craze in abdominal surgery. I know personally, several very celebrated abdominal surgeons who rather deprecate the tedious attempts to make a decisive diagnosis before opening the abdominal cavity, and it has appeared to me that the grand idea of exploratory and confirmatory incisions have been degraded from their high altitude, not by their author, but by supposed followers.

One of England's foremost surgeons remarked the other day, that as years went on he was surprised how many abdominal tumors recovered or remained stationary where the possessors refused operation; he declared he was in favor of more cultivation in abdominal diagnosis. I will give a sample of what happened a young gynæcologist,

who had studied a few months with a good specialist. The young doctor lived in a country town when the laparotomy craze started, and on his return, he did (I think) about 42 laparotomies in 14 months. We all wondered how the women got their bellies out of gear on the first year after his return.

Some of Mr. Lloyd's systematic methods of teaching may be illustrated by reproducing a few of his remarks as he began to operate on a man for stone in the bladder. He said:

What are the signs of stone in the bladder?

a. Frequent micturition: *b.* Pain at the end of the penis: *c.* A few drops of red blood as urination ceases: *d.* The click of the sound on the stone: *e.* Worse on exertion.

How does one diagnose stricture of penis?

a. Frequent micturition: *b.* Pain along the middle of the penis: *c.* Not worse by exertion: *d.* Use the sound.

How does one diagnose enlarged prostate?

a. Painful micturition: *b.* Worse when bladder is full and at night: *c.* Pain at neck of bladder: *d.* Introduce finger in rectum.

He then operated on the man. He introduced a rubber bag into the rectum, and blew it up with air; then syringed ten ounces of water into the bladder, and tied the penis, which made the viscus appear under the abdominal wall like a full-grown fœtal head; next incised the abdominal wall and bladder and removed the various stones, and also cut off with the scissors a tumor, about the size of a plum, from the prostate, which projected into the viscus. The bladder was washed out and drained supra-pubically with rubber tube, and one or two silver sutures put in the wound, though he did not close it. He said no bladder wound should be closed in cystitis.

Mr. Lloyd observed that litholopaxy, as recommended by Bigelow, of Boston, was *the* operation for stone-in-the-bladder, and that it was now done on children as young as two years; but if stricture of urethra existed, other methods stood equal chances.

Mr. Lloyd does one of the most successful and useful operations in resection of the knee joint. His results are beautiful, and, in my mind, due to the method of dressing. He cuts down into the knee and saws off the ends of femur, tibia, and fibula, in a way to secure the desired result when the leg is healed. He then unites with catgut the circumference of the femur peritoneum to that of the tibia and fibula periosteum, along with the adjacent connective tissue; the skin is united with silver wire. The important step in the operation, consists in driving steel dowels, about six inches long, obliquely through tibia and femur; these dowels cross each other in the middle, and give the bones absolute fixation (they are left in about six weeks, or as long as desired); then the leg is splinted and an iron rod strapped on the anterior side, to suspend it from a frame-work. By means of the splints and suspending irons, and especially the dowels, is secured absolute mechanical and physiological rest; this is, no doubt, the reason of Mr. Lloyd's excellent results in knee-joint resections. Sometimes he does not re-dress for five or six weeks, or even more. During the past nine years I have made three trips to Europe, remaining about a year each time, attending the best surgical clinics, but nowhere have I seen more successful or uniformly good results than in Mr. Lloyd's hands. It seems to me that Mr. Lloyd should pursue the study of the resections of other joints until he could secure equally good results, for it certainly appears that these results depend on absolute mechanical and physiological rest.

I have scores of times demonstrated that absolute mechanical and physiological fixation and rest secure perfect healing in intestinal anastomosis by the aid of the rawhide and segmented rubber plates. The dowels which Mr. Lloyd employs do not really create suppuration, and at the end of five to seven weeks they may be drawn out of the newly healed joint with a strong pair of forceps, and but a drop or two of sero-purulent fluid appear. I am convinced that many resections of joints become partial failures from insufficient fixation; the insufficient fixation shows itself by allowing the joint to heal with slight motion.

Mr. Lloyd showed me a peculiar case which involved the parotid gland. A young man came into his clinic with much mental disturbance over a swelling which appeared under his jaw every time he ate his meals,

and generally enlarged to the size of an egg, interfering with deglutition; it would gradually subside about two hours after meals. Mr. Lloyd diagnosed as an obstruction to the outflow of saliva in the ducts of the parotid.

Tumors of the salivary glands generally disappear in about two weeks. The first case of this kind that came under Mr. Lloyd's observation was that of a medical man, who was suddenly attacked at meal time. The patient thought he was going to die as the newly formed swelling arose so quickly that the recurrent laryngeal nerves made him feel as if he would smother every minute; it acted like a paroxysm of acute asthma. The tumor proved to be an obstruction to the outflow of saliva, and the patient recovered in a fortnight. It hardly seems to be a pathological condition of the gland, but rather an accidental mechanical obstruction. May it not be a spasmodic stricture of the ducts due to some local temporary irritation? Possibly, accumulated epithelium may for a time dam up the outlets.

These swellings alarm the patients very much and if very large are most distressing mentally and physically in their first appearances. Mr. Lloyd said he had seen about a dozen of such cases in the past ten years.

About seven weeks ago Mr. Lloyd explored the abdomen of a girl twelve years of age, who was thought to have an ovarian cyst, but proved to have tabes mesenterica; dozens of good-sized tubercles could be seen scattered all over the peritoneum. The contained ascitic fluid was emptied, the peritoneum well irrigated, and the abdomen closed with a glass drain-tube, when she made an excellent recovery, and in seven weeks gained about twenty-five pounds. This strengthens the theory and practice that Sir Spencer Wells set on foot in 1865, viz.: That opening a tubercular peritoneum often aids in curing the patient. For ten years I have watched the medical teaching in Europe and the United States, and I am more and more convinced that if we are going to keep American schools abreast of the rapidly-marching science of medicine, we must lessen our didactic teaching, and adopt more and more clinical instruction. The English and German student is now taught *five* years, and clinical and practical work forms the essentials of his course. He is drilled in the actual details of his life work; sees patients sicken and recover, or die; can often see the *post mortem*, and judge for himself what killed the patient. But I think it is a shame to Americans, at this age, to annex M. D. to a man's name, after two courses of study, each of six months, when double the study does not even let in the sunlight. However, excessive competition will sooner or later induce doctors to aid in restricting unqualified medical practice.

FRED. BYRON ROBINSON.

ARSENITE OF COPPER IN ACUTE DISEASES OF THE INTESTINE.

At a medical meeting held in Pittsburg last year, Dr. Aulde made known the results of an inquiry which he had made respecting the therapeutic value of arsenite of copper. These results comprehend 580 cases of intestinal affections, of which 116 were cases of Asiatic cholera, 151 of cholera infantum, 198 of diarrhœa and dysentery, 82 of intestinal colic, 6 of the diarrhœa of phthisis.

The result from all these observations, was that arsenite of copper may be safely employed in acute intestinal affections, and that it possesses a high therapeutic value. This remedy is quite successful in Asiatic cholera, cholera infantum, alleviates the pains of colic and depresses the temperature of typhoid fever.

It should be given from the onset. When arsenite of copper does good, it is not by being antiseptic or by being directly a microbicide; this at least seems to be the result of Schulz's observations.

The dose of arsenite of copper is very small. Aulde (Therapeutic Gazette, July, 1889) recommends, in typhoid fever, the use of a single tablet containing $\frac{1}{100}$ of a grain daily. Tablets containing $\frac{1}{5000}$ are in the market; five or six of these a day may be given to infants. Aulde recommends the following method of administration: A single tablet containing $\frac{1}{100}$ grain is dissolved in four ounces of water; the dose is a teasponful every ten minutes for an hour, after which it may be given once an hour while the patient is awake.

E. P. HURD, M. D.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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GEO. S. DAVIS, Medical Publisher, Box 470.

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Editorial.

AN INTERESTING CASE WITH A MORAL FOR DOCTORS.

A case illustrating the malicious prosecution to which physicians are sometimes subjected by ungrateful and designing patients has recently occurred. Dr. Schuyler C. Graves, of Grand Rapids, Michigan, was arrested on complaint of one Arthur E. Gammage, who was an inmate of St. Mark's Hospital, and under the care of Dr. Graves. The complainant has brought suit against Dr. Graves to recover $50,000 for maltreatment, and for the same amount against Dr. Reuben Peterson, who, as the Superintendent of St. Mark's Hospital, had in this capacity official charge of Gammage, as of other patients, Gammage falsely alleging that Dr. Peterson had maliciously attacked him, and endeavored to put him in a straight-jacket.

It has been ascertained, by careful investigation, that the salient facts in the case are as follows: Gammage consulted Dr. Graves for relief from urethral stricture, and external urethrotomy was arranged for, with the patient's full consent and understanding. Chloroform was decided upon for the anæsthetic, and on its administration by Dr. Edie, who assisted Dr. Graves, the patient, who was a very powerful man, strenuously resisted the efforts to keep him on the operating table. As a result of this his arm—which he claimed was broken—may have been inadvertently twisted so as to cause subsequent pain, but it was demonstrated was not otherwise injured.

The patient's struggles were maniacal, and it was thought prudent to postpone operation, as no additional assistance was available to restrain him. When he recovered from the effects of the anæsthetic, Gammage, while pretending in Dr. Graves' presence to be anxious for him to do the operation contemplated, later during the Doctor's absence, grossly misrepresented the Doctor to others, telling the most willful lies concerning him, to the effect that the operation was forced upon him. Learning this, Dr. Graves refused to again attempt to operate.

As a result of this refusal, Gammage made affidavits as to maltreatment, which led to Dr. Graves' arrest. Inasmuch as Gammage's affidavits were not substantiated by facts, a suit against him for perjury was at once instituted. Gammage being informed of this suit, mysteriously disappeared for several days, but having the temerity to return to Grand Rapids, was arrested, and subsequently bailed *by the aid of a homœopathic physician*, who gave bonds for his appearance.

In view of the important bearing such a case as this has on public opinion, and the too little recognized dangers and slanders to which physicians are exposed by malicious patients, THE AGE has made inquiries as to the standing and reputation of the complainant, Mr. Gammage. From these inquiries, THE AGE is able to state authoritatively, on the evidence of reputable citizens of Detroit who know Gammage well, and who have had dealings with him, that his record is a most unsavory one.

Assuming to be a physician, which he is not, he attempted to practice dentistry in a town in Michigan, with the result of fracturing the jaw of a patient and being driven from the town he located in.

Gammage has repeatedly represented himself as "Albert Ross," the author, and carries a card case with A. Ross printed upon it. It has been ascertained from the author, who writes under the *nom de plume* of "Albert Ross," that this deception of Gammage is only another of the tricks that this impostor devised to profit thereby.

With a most engaging presence and many plausible but false representations as to his qualifications, he connected himself with an insurance company, whom he defrauded of a considerable amount of money. With "ways that are dark and tricks that are vain," this plausible adventurer managed to impose

upon reputable business men, and landladies to his profit and their financial loss. It is stated by those who knew him intimately that when this "enterprising burglar wasn't burglaring," in the orthodox manner "he loved to lie a-basking in the sun" of the smiles of the fair sex and tales of his adventures in engaging the affections of the softer sex only to rob them of their real or personal property are well substantiated.

That the representations of a man of this character against those of well known and esteemed physicians can have any standing in a court of justice before any intelligent jury or judge does not seem credible. But even though Dr. Graves and Dr. Peterson are exonerated from the false charges made against them, this will be no adequate reparation for the trouble and annoyance caused them, and damage done them.

It is rumored, though we hope erroneously, that some members of the profession of medicine not in affiliation with the same school as that of Dr. Graves are exerting what influence they possess to depreciate him with the expectation of profiting themselves thereby. If this be true, such action must only result in injuring the interests of its promoters in any fair minded community.

We shall await with interest the termination of this case for if one morbid, fanatical, or maniacal patient succeeds in obtaining a verdict against an honorable physician, one may expect an epidemic of false affidavits and charges innumerable from unscrupulous patients who would, viper like, suck the life blood of reputation of those who minister to their ills.

There is another lesson taught by this case by the suit against Dr. Peterson. It illustrates the necessity of those holding executive positions in private or public institutions for the treatment of the sick or mentally deranged, properly guarding themselves against libellous allegations.

We hope to present in the light of the subsequent history of these cases, facts demonstrating the great importance of medical officials dealing with this class of patients having witnesses present when visiting them or operating on them.

PASTEUR AND HIS CRITICS.

Louis Pasteur has been the most honored and the worst abused *savant* living. His contributions to science, which are certainly many and important, have perhaps been unduly praised by some of his admirers. At the same time, the thesis is certainly *defensible* that he is the father of modern antisepsis, at least, Joseph Lister affirms that he got his inspiration, and largely his methods, directly from Pasteur. If anyone should attempt to write a history of antisepsis in medicine, surgery, and obstetrics, he would inevitably be led back to Pasteur's studies on fermentations and on spontaneous generation, dating from about 1859. Doubtless antisepsis would have come all the same, and due credit must be given to Bantock's theories and to his practice, but there is no justice in ignoring the powerful stimulus to research and to experimentation which has come from Pasteur's labors.

Peter and Lutaud charge Pasteur with exploiting, for gain, procedures in themselves worthless, and the latter asserts that the discovery of attenuated virus originated not with Pasteur, but with Magendie. Pasteur himself declares that he got his hint from Jenner. Certainly, if there be anything of worth in the discovery, to Pasteur at least is due the credit of developing and perfecting it; it is for the future to decide as to the prophylactic and therapeutic value of this new method of treatment which has lately blossomed out in Koch's "tuberculin" inoculations.

Pasteur has, without doubt, made a good deal of money out of discoveries which, while of the greatest scientific interest, are proving to be of little practical value. Such has been the case with his labors on *pebrine* and *flacherié*, which have not saved, and are not saving, the seri-culture of France; with his methods for keeping beers and wines from spoiling; and even with his anthracoid vaccinations.

It must be conceded that a very startling exhibition of the efficacy of those vaccinations against the deadly *charbon* was made at Pouilly-le-Fort in 1881. We think that no candid person can read the account of that demonstration without being convinced that it was a triumphant display of the

merits of the discovery. At the same time, the anthracoid vaccinations have not of late proved to be successful, and they have actually been pretty much abandoned by all European nations.

M. Pasteur complains that his detractors are not scientific experimenters, and that both by prejudice and by lack of the requisite expert knowledge, they are incompetent to judge of the methods and results of the *École Normale*. This is true in its application to M. Peter, and doubtless to some extent, to M. Lutaud, though the superiority of these men in their respective departments is unquestioned. Peter has fought the microbe theories from the first "with tooth and claw," and the very name of microbe seems to put him into a passion. He confesses that he knows practically nothing of bacteriological researches, and does not want to know anything of them. Lutaud shows by the tone of his writings that for some reason he has a bitter animosity against Pasteur. His book "*M. Pasteur et la Rage*" (which has gone through two editions), reads more like the special plea of an astute lawyer, than like a fair review. He shows wonderful skill in marshalling and presenting the arguments that help his case, and either quite ignores or minimizes the importance of facts that lean the other way. This is not the scientific method. This is not the way to investigate with the sole end to get at the truth. Lutaud presents with great power the arguments which have convinced many (as Dulles, Spitzka, Shrady, and others in this country), that the anti-rabic inoculations are of no value in prophylaxis, but he quite ignores the positive facts on which so many have based their belief in the protective efficacy of these inoculations.

It is a fact that eminent men of science, Tyndall, Huxley, Vulpian, Horsley, etc., have declared their faith in "Pasteurism;" it was Vulpian, Dean of the Faculty, who first urged that these vaccinations should be practiced on human subjects bitten by mad dogs. The results of the "Institute" have been sufficiently favorable to satisfy the majority; a mortality of less than 1 per cent. (or certainly not more than 1.50 per cent.) on the part of those vaccinated has been affirmed by the advocates of the method, while the mortality of those *bitten but not vaccinated* is said to be 16 per cent.

Moreover, Grancher, Dujardin-Beaumetz, Victor Horsley and others who have witnessed the experiments on animals affirm that to deny that the anti-rabic vaccinations protect is to impeach sound observation and testimony.

Dujardin-Beaumetz affirms that trial experiments like the following have been made: Pasteur takes fifty dogs on which he performs the preventive vaccinations; fifty other dogs, to serve as checks (*temoins*) are not vaccinated. These hundred animals are now all inoculated in the brain with the virus of street-rabies. The fifty that were not inoculated all succumb; not one of the vaccinated becomes rabid.

That experiments of this kind have been made, and that it was such experiments that first led Pasteur and his friends to apply the preventive inoculations to man, is, it would seem, proved by competent testimony. On the other hand, Von-Frisch on attempting a like series of experiments in his laboratory in Vienna, met with nothing but failures.

Lutaud devotes a long chapter to the objection that the prophylactic virus is inert because no local or general reaction follows. In another place, he is disposed to attribute the mortality which has followed the vaccinations in some instances to the introduction into the system of such deadly material. Granting that in many cases no reaction follows, one might as well say that arsenic is inert because a patient taking it shows no toxic symptoms. The assertion that the rabbit disease, which forms the basis of the protective vaccinations, is not the same as the canine disease which first caused it, seems too frivolous for consideration. Several years' careful study of canine madness in all its forms, in animals and in man, have undoubtedly given Pasteur and his colleagues a thorough knowledge of the subject.

Pasteur, in demanding that his critics should have some practical acquaintance with the experimental methods which he pursues, is not, it seems to us, asking too much. A man ignorant of musical notation—or without an ear for music—would not be a competent critic of a musical composition. The best art-critics are those who know most

of art. A man knowing nothing of *leger de main* is not a competent man to judge of the performance of a professional juggler, or a mediumistic trickster, affirming that his feats were performed by spirits! A person ignorant of bacteriological studies and methods is not a competent critic of bacteriology. Such men as Pasteur claim to represent science and scientific methods, and their results and conclusions should be met by something besides denial and scepticism. The bacteriologist is able to *demonstrate* his contention.

"This little glass tube contains the bacillus tuberculosis; I can produce tuberculosis with it."

"This test-tube contains the Klebs-Loëffler bacillus; I can produce diphtheria with it."

These are the tests to which bacteriologists appeal.

M. Pasteur affirms: "I can produce rabies in animals at will, and I can prevent it under certain fixed conditions." The latter part of the proposition seems to us much more doubtful than the first (which is really undisputed), *as only a rather small percentage of animals bitten ever become rabid.* Despite the considerations mentioned above and the statistics, despite the experiments which plead in favor of the method, we are inclined to think the question of anti-rabic inoculations still *sub judice.*

TWENTY-SIXTH ANNUAL MEETING MICHIGAN STATE MEDICAL SOCIETY.

The meeting in numbers, in the character of the papers read, and the harmonious dispatch of the business and social features was a gratifying success.

It was held during June 11th and 12th, at Saginaw, Michigan, in the commodious Academy of Music. The members were welcomed to Saginaw, by Rev. Geo. R. Wallace, who paid a glowing tribute to the medical profession.

The reports of the Executive, Publication, Necrology, and Admission Committees, and of the Treasurer and Secretary, were presented, and the following annual addresses delivered: "Surgical Progress," by H. O. Walker; "Phthisis," by Heneage Gibbes; "The Influence of Dress in Producing Physical Decadence of Women," by J. H. Kellogg; "The Dignity of the Profession," by L. W. Bliss. The proceedings of the various sections comprised the presentation and discussion of many excellent papers, some of which will appear in the columns of the AGE.

The principal, general social feature of the meeting was the reception tendered the visitors by the Hon. T. A. Bliss.

The merits of Flint and Battle Creek were discussed for the next meeting, Flint being chosen.

The officers elected for ensuing year were: President, George E. Ranney, of Lansing. Vice-presidents, Drs. J. B. Griswold, Grand Rapids; E. A. Carrier, Detroit; G. B. Voorheis, Coldwater; A. F. Hagadorn, Bay City. Treasurer, W. G. Henry, Detroit, Charles W. Hitchcock being continued as Secretary, his term not expiring until next year.

The gentlemen nominated and elected as members of the Judicial Council for the term of three years, to fill vacancies, were: Directors—J. E. Emerson, Detroit; F. K. Owen, Ypsilanti; Hugh McColl, Lapeer.

The delegates appointed to the American Medical Society were: Drs. Owen, Tupper, Granger, Baker, Willson, Donaldson, Stoddard, Cook, Upham, French, Alfred, Thompson, Greene, Shephard, Manton, Schultz, Groener, Graves, Welch, Johnson, DeCamp, Barnes, Coke, Pratt, Taylor, and Greene.

Among the more important questions considered was the advisability of raising the annual dues from three to four dollars. This was decided in the negative.

Dr. V. C. Vaughan, of Ann Arbor, reported that the Committee on Special Legislation concerning Embalming Practices had finally agreed upon a bill to the following effect:

No body shall be embalmed without the consent of the physician attending, or the Health Officer of the village, or a Justice of the Peace.

When the body is embalmed, a license shall be first procured, and a written record kept in the County Clerk's office stating the name of the deceased, cause of death, and the name of the embalmer.

This bill has been placed in the hands of Senator Toan, of Ionia, who has given Dr. Vaughan to understand there is no doubt of its passage.

The question of dentists as members of the Society was decided in favor of admitting those who have been graduated at a medical college.

Secretary Hitchcock, during the first day's proceedings, announced to the Society that charges had been placed in his hands against Dr. L. W. Bliss of Saginaw, and Dr. O. J. Fay of Carrollton. This announcement excited active discussion among the members, resulting in the appointment of a special Judicial Council consisting of Drs. T. K. Owen, Ypsilanti; J. H. Bennett, Coldwater; George E. Ranney, Lansing; E, Boise, Grand Rapids; W. E. Breaky, Ann Arbor; and D. C. Wade, Holly; who took some testimony concerning the charges made, but were unable to present a complete report before final adjournment.

THE OBLIGATIONS AND DERELICTIONS OF MEDICAL PRACTITIONERS TO PROFESSIONAL CHARACTER.

Under this title, W. R. Cluness, M. D., President of the California State Medical Society, presents in his address at the twenty-first annual meeting, some pregnant facts as to existing professional practices which are to be deplored, "Percentages in Prescriptions" and "Society Practice." His article based on an elaborate compilation in tabular form of replies received from a thousand inquiries sent to physicians very generally distributed over the United States and Europe, shows the prevalence of departures from the Ethical laws governing the practice of medicine, and demonstrates their operation in lowering the professional standing and emolument of practioners of medicine. The paper of Dr. Cluness is published in the Occidental Medical Times, May, 1891, and the lesson it teaches we would commend to all those interested in the elevation of the modern Doctor.

As to physicians receiving percentages on prescriptions, Dr. Cluness says:

The moral turpitude of this business, I do not hesitate to say, attaches more to the physician than to the apothecary, for the latter is half, often more than half, a tradesman; and if the strictures af Herbert Spencer, in his essay on the "Morals of Trade," fit a particular druggist, we little wonder. But the public have a right to expect better conduct of the educated members of a liberal profession. I shall not undertake to advise them how to proceed; but something ought to be done to abate a practice which is so common as to cast a cloud over the whole body of medical practitioners. What family now knows surely whether its medical adviser is or is not concerned in this traffic? What honorable physician would not be glad to stand clear of the color of suspicion?

As to "society practice," which tends to decrease the public value of physicians' professional services, Dr. Cluness states:

This system, to my knowledge, has existed in England for more than thirty years, flourishing under the appellation of "Friendly Associations," "Sick Clubs," "Provident Dispensaries," etc.; and America has probably borrowed it from that country. The subject has been discussed in English medical journals for many years, and has been justly regarded as a crying abuse. In the United States it dates back about twenty-five years, is now rapidly growing in the cities and large towns, and is gradually invading new teritory.

The over-work and under-pay of this system, as hardships to the medical man, have been sufficiently exhibited by the operation of these societies, and also the superficial character of the service which must needs be rendered. But these are not the only evils. The physician becomes the bondsman and common drudge of the society, whose pitiful wages command his attention for the most trival ailments. The hired servant must go or lose his place at the next election, and must bear with becoming humility the fault-finding of his ungrateful patients. On the other hand, it virtually denies to members the choice of medical attendant. The descendants of the early settlers of New England, who fled from the oppression of an established church, now, with strange inconsistency, voluntarily assume the yoke of an established medical relief. It is the proud boast of the model Republic, that every one here can choose his own religion, and physic his soul after his own fashion; but the society system takes charge of his body, and puts it down to the lowest bidder to be physicked. There is no reasonable doubt that most of these "societies" are organized for the chief, if not the sole, object of cheapening medical services; and many well-to-do people are not ashamed to be found in their ranks.

The paper concludes with a strong appeal for the necessity of reforming these

evils which can only result in lowering physicians in public esteem. To be respected we must be respectable, and self-respect is the foundation. He who barters his self-esteem and good name for pelf is in worse plight than he of whom the great dramatist wrote:

"Who steals my purse, steals trash: 'tis
something, nothing;
'Twas mine, 'tis his, and has been slave
to thousands;
But he that filches from me my good
name,
Robs me of that, which not enriches him,
And makes me poor indeed."

RESEARCHES ON THE COAGULATION OF THE BLOOD.

M. M. Arthus reports, in the Journal de Pharmacie et de Chimie, he has been making some experiments on the coagulation of the blood, and finds that, although many investigators have preceded him, not all has yet been told regarding the question.

The experiments of Denis, Schmidt, and Hammarsten, have shown that the formation of fibrin in the blood depends upon the action of a soluble ferment—the fibrin-ferment of the white corpuscles, upon the substance called fibrinogen, of the plasma. Denis maintained that plasmin (or impure fibrinogen) underwent a modification, giving rise to fibrin, that this fibrin, less soluble in the plasma than plasmin, was in part precipitated, and that the rest remained in solution. Schmidt considered the substance fibrinogen or serum-globulin as the material on which depended the formation of fibrin, and maintained at most, the necessity of the intervention of a soluble ferment. Hammarsten attempted to prepare fibrinogen and fibrin-ferment that would produce fibrin without the use of serum globulin. The conclusion arrived at from all this experimentation was, that the fibrinogen of the plasma was transformed by fibrin-ferment, and that fibrin was the product of this transformation.

But M. M. Arthus says that the rôle of the lime salts has not been demonstrated, and that the presence of these salts in solution in the blood is, however, a necessary condition of coagulation.

If oxalate of potash, either in powder or in solution, be injected into the blood in the proportion of 8 to 10 decigrammes to the litre of blood, it will completely prevent the formation of fibrin. When, on being drawn into the vessel, the blood is not suddenly coagulated, its coagulation can be arrested by the addition of the oxalate of potassium. Oxalates of soda or ammonia in the same proportions have the same action, so have all the alkaline salts that will precipitate lime.

Fibrinogen and fibrin ferment are not precipitated by the oxalate.

The addition of more lime, when coagulation has been prevented by adding oxalate of potash to precipitate the lime salts, will again cause the blood to spontaneously coagulate. The lime does not act in causing coagulation simply by its presence alone, but it is, however, one of the essential constituents of fibrin, and, in certain conditions of the system, the amount of fibrin formed is in direct proportion to the amount of lime salts present in the plasma.

The phenomena of coagulation of the blood, and that of the caseation of milk, seem to be alike in that both are caused essentially by the presence of the lime salts. It seems to be an albuminoid calcification that takes place when fibrin is formed.

The theories of Schmidt and Hammarsten on the coagulation of the blood are insufficient. There seems to be something more, and that is charged to the presence in the blood of the lime salts.

DR. WALTER WYMAN SUCCEEDS DR. J. B. HAMILTON AS SURGEON-GENERAL.

Dr. J. B. Hamilton, Supervising Surgeon-General of the United States Marine-Hospital Service, has resigned in order to enable him to accept the Professorship of Principles of Surgery in Rush Medical College.

Many regrets will be expressed at his retirement from a position where his services have been of inestimable value to the entire country.

Dr. Walter Wyman is the legitimate successor of Dr. Hamilton, and will no doubt fully sustain the enviable reputation of his predecessor.

Book Notices.

A Literary Sensation.

Since the departure of Amelié Rives-Chanler from this country, almost immediately after her marriage, we have had only brief newspaper paragraphs concerning her life and literary intentions. Not a little curiosity has been displayed as to the possibility of her complete withdrawal from the field of letters. It is now nearly three years since anything of importance has appeared from her pen, but no one has believed that the exceptionally brilliant author of "A Brother to Dragons" had finished her career as a writer. A recent paragraph in the daily papers, announced the fact that Mrs. Rives-Chanler was hard at work on a new novel destined to arouse the entire literary world by its artistic merit and bold originality. There have been many conjectures advanced as to the probable source through which the new novel would be given to the public. Notwithstanding the high prices which Mrs. Chanler demands for her manuscripts, it was known that many publishers were in the field in competition for her latest work. While many rumors were afloat, the Cosmopolitan Magazine had quietly secured and placed it in the hands of a famous artist in Paris for illustration. It is announced now that the first chapter will appear in the August number, and that, in the estimation of critics who are most competent to judge, this last story will be the most finished, as well as interesting product of this versatile Southern pen. The story is likely to be the literary sensation of the year. Its publication in the Cosmopolitan is a guarantee that it will contain nothing of the kind that excited criticism in Amelié Rives' earlier productions.

Scribner's Magazine for June.

The contents of Scribner's for June are as follows:

"Molière." Frontispiece. After a painting by Coypel; engraved by Gustav Kruell.

"The Boulevards of Paris." By Francisque Sarcey. [The second article of the series on the Great Streets of the World.] The illustrations by C. Jeanniot; engraving by Henry Wolf.

"Parson Joye's Justice." By Maria Blunt.

"Safety on the Atlantic." By William H. Rideing. [The third article of the series on Ocean Steamships.] Drawings by Carlton T. Chapman, Charles Broughton, V. Perard, M. J. Burns, and F. C. Schell; engraving by Peckwell, Heard, Witte, E. H. Del'Orme, E. Clément, Schuesler. J. Clément, George Del'Orme, and M. J. Whaley.

"An Alabama Courtship"—part second. By F. J. Stimson. (Conclusion.)

"Molière." By Andrew Lang. With facsimiles of title pages of early editions of his plays.

"In Camp." By Charles F. Lummis.

"Boys' Clubs." By Evert Jansen Wendell. Drawings by Herbert Denman; engraving by Putnam, State, Peckwell, and E. Clément.

"German Sketches"—I. The Czar's Diamond; II. By the Ill. By Bliss Perry.

"Some Photographs of Luminous Objects." By Wallace Goold Levison. With numerous illustrations.

"De Mortuis." Edith M. Thomas.

"Vergniaud in the Tumbril." By Louise Imogen Guiney.

"The War as We See It Now." By John C. Ropes.

"The Point of View"—Mr. Morley and Literature; Legislation and the Quack; An American Renaissance; The Matron in Fiction.

The Homemaker for June.

"The Three Fates," a new novel by F. Marion Crawford, opens attractively in the May number of the Home-Maker.

The illustrated articles are "Some Old Time Jersey Weddings," beginning with "The Bridal of Lady Kitty Alexander," and followed by the "Camera," illustrated by a number of distinguished Amateurs, including Miss Catherine Reed Barnes, Mr. Elbridge T. Gerry, Mr. Franklin Harper, Mr. David Williams, and others.

"Bicycling for Women" is delightfully written about by a well known New York expert, Mrs. Josephine R. Redding, editor of the Art Interchange.

The editor continues her series of papers under the head of "Our Little World," and discusses various matters in the "Arm Chair." Grace Ellery Channing, Clinton

Scollard, Lucy Agnes Hayes and Carlotta Perry contribute charming poems, and there are short stories and a great variety of excellent miscellaneous and domestic matter, besides the valuable "Cycle" department, which gives the records of nearly a hundred federated clubs.

COSMETICS By Dr. Heinrich Paschkis, Docent at the University of Virginia. Comprising over 295 formulæ for the preparation of all kinds of cosmetics. Wm. Wood & Co., New York, Publishers. Price, $1.50.

This work devotes 210 pages to the presentation of the application of cosmetic formulæ which may be medicinally employed.

As is well known, the minor ailments of patients are apt to receive too little attention from the general practitioner, though to their proper relief is to be attributed in great degree the financial success of many eminent doctors.

Dr. Paschkis gives withal a scholarly *resumé* of the advanced views of such eminent specialists as Hebra, Anspitz, Kaposi and Neumann, of the Vienna school, and the works of Husemann, Vogl, Hirzel, Piesse, and Atkinson.

We believe many physicians may add to their practice and reputation by possessing themselves of the information this book affords. It may be, not infrequently, of much more moment to remove a deformity or blemish from any lady's fair face than to bring her safely through typhoid or pneumonia.

THE AUTHOR. A Monthly Magazine for Literary Workers. Subscription, $1.00 a year; single copies, 10 cts. Publishers's address, Box 1905, Boston.

The May number of this entertaining magazine is before us, and comprises a choice *resumé* of literary news and gossip. Among its articles are the following: A Biographical Sketch of Prof. Charles G. Roberts, A Plea for the Village Library, The Science of Fiction, Typewriter or Pen, Fiction and Domestic Misery, Brevity in Fiction, Literary Criticism, The Writer's Environment, Personal Gossip about Writers, Literary Notes and News.

A special feature of the May issue is a supplement containing the Copyright Laws of the United States, including the Act of 1891, which comprises the Essential Changes in Copyright Laws; Relations of the Amended Laws to Citizens of Foreign Countries; Revised Statutes of the United States, 1870, as amended by Act of 1891-Act of 1874.

GEO. P. ROWELL & CO.'S BOOK FOR ADVERTISERS, Containing Lists of the Best Newspapers in the United States and Canada, Together with a Complete List of all the Class and trade Journals. Being a compilation from the American Newspaper Directory with circulation, ratings and some advertising rates, with a statement of the best way to place newspaper advertising. 178th edition. Geo. P. Rowell & Co., New York, Publishers. 1891.

This book of 368 pages is an index to the circulation of newspapers and trade journals worthy of patronage, classified by states, alphabetically arranged, thoroughly indexed.

It presents in a direct and practical way, features governing successful advertising which deserve the careful consideration of all interested in advancing their business interests by a judicious investment in advertising.

It covers also special estimates as to cost for space in lines of papers circulated in special states and towns.

It will be found most convenient for reference to those who recognize that advertising is to business what steam is to commerce, the grand propelling power.

AMPUTATIONS IN THE LIGHT OF PROTHETICAL SCIENCE. By Charles Truax, Chicago, Ill.

SEVENTEENTH ANNUAL REPORT of the Secretary of the State Board of Health of Michigan for year ending June 30th, 1889.

THE CAUSATION OF INFLUENZA.

THE PREVENTION OF SMALL-POX. By Henry B. Baker, Secretary Michigan State Board of Health.

PROCEEDINGS AND ADDRESSES of the Sanitary Convention at Alpena, Michigan.

COMBINATION AND CHART MAP, showing relative and average prices for American farm products compared with prices for silver bullion, and effects on American producers. Published by Geo. O. Jones, Washington, D. C.

Notes and News.

A New Morbid Habit.—

It is the inhalation of tobacco-smoke. Our readers may not agree that it is new, but in the sense that it has become of late years enormously prevalent and a peril that now confronts society, it may be so considered. Ten years ago only about four hundred million cigarettes were manufactured in this Country yearly; now the number reaches into the billions. The cigarette-habit has extended and affected all ages; even the boys smoke more than ever, despite legislation. It is not, however, the cigarette smoked in the ordinary fashion that does harm; it is the inhalation of the smoke. This introduces quickly and delightfully a narcotic poison into the system, and awakens in the *habitue* a sensation as delightful as that produced by opium. The old cigarette-smoker would not exchange a few deep whiffs of his cheap cigarette for the finest Havana that could be bought with gold. It is an intoxication in which he revels, and to which he becomes a slave. He is a "cigarette-fiend." He admits it, and smiles over it for a time.

The seriousness of cigarette smoke inhalation lies not alone in the fact that it involves a steady absorption of poison; but in the utter hopelessness of the habit, and the entire inability of the indulger to give it up. Once a cigarette-inhaler, always one. In this respect it resembles with painful similarity the opium-habit, to which it has many points of resemblance. One may stop the use of the pipe, or cigar, or the use of tea, or beer, or whiskey, but the morphine and tobacco-inhalation habits, if well established, are practically incurable. The patient may stop for months, or even a year, but he invariably returns to his love. Such is the experience of the writer, corroborated by the testimony of other physicians.

Tobacco-smoke contains aqueous vapor, carbon soot, nicotine, traces of certain organic acids and of such hydrocarbons as creasote, and of products of the anilin series, such as pyridin. It is the nicotine, however, which probably does the harm.—*Medical Record.*

The Family Skeleton's Ball.—

Did you hear of the family skeleton's ball?
From many a closet in many a wall—
Many a gorgeously gilded wall—
Thro' passages curtained with many a pall,
They trooped to subterranean hall;
Skeletons spare and skeletons tall,
Skeletons stout and skeletons small.

There were skeletons grim and skeletons grinning.
Skeletons sinned against, skeletons sinning,
Skeletons staggering up from the mud,
Skeletons stained with innocent blood.

Here was a great political boss,
The gold in whose fingers had turned to dross.
And one with a tongue all chained by fire
Because its owner had been a liar;
He had stabbed reputations all in the dark,
And this Cain of character bore his mark.

'Twas a sight to see how the partners met,
How skeleton couples danced each set,
Danced till their naked bones were wet
With an oozy, horrible, clammy sweat;
And they needed never a castanet,
For their joints made a noise one couldn't forget—
If one heard it one would hear it yet.
Otherwise there was no music at all
At the family skeleton's midnight ball.

—[Kemper Bocock, in *Life.*

Microcidin, a New Antiseptic.—

By adding to β naphthol, brought to the fusing point, one-half its weight of caustic soda, and then letting the mixture cool, there is formed a whitish powder, of which 75 per cent. is naphtholate of soda, and 25 per cent. various naphthol and phenol compounds.

The powder is soluble in three parts of water, imparting to it a brownish color. The solution is described as powerfully antiseptic, very feebly toxic, not caustic, not injurious to instruments or fabrics. According to the author, it has an antiseptic power inferior to sublimate and naphthol, but ten times greater than boracic acid.

It is chiefly eliminated by the urine and lowers the temperature of the body.

Polaillon has tried it in ulcers of the leg and suppurating wounds, and asserts that it destroys bad odors and promotes healing. For infected wounds a 5:1000 solution is needed; for uninfected wounds a 3:1000 is strong enough. These two solutions can be used for vaginal and intra-uterine injections,

or for irrigating abscesses and suppurating mucous and serous cavities.—*La France Médicale.*

The Dangers of Open Horse-Cars.—

Brooklyn physicians have been so strongly convinced of the causal relation between open horse-cars and the increase of the mortality rate, that they have induced the Health Commissioner to issue an order prohibiting the operating of open cars until after May 15th of each year. The Health Commissioner also sent to the Common Council the following ordinance, asking its approval.

No person or persons, corporation or railroad companies, owning, leasing, or operating any surface railroad in the city of Brooklyn, shall use, operate, or run, or permit to be used, operated, or run, or assist in the operating or running, of any open car or cars on any of the surface railroads in said city of Brooklyn between the 15th day of September in any year and the 15th day of May in the next succeeding year.

Any person or persons, corporations, or railroad companies, violating this section, shall be subject to a penalty of not less than $10 nor more than $100 for each and every car used, operated, or run, in violation thereof.

Home for Victims of Opium, Chloral, and Cocaine.

Brooklyn is soon to have a home for victims of the opium, chloral, and cocaine habits. A site for the proposed new institution has been secured in Brooklyn Avenue, Park and Prospect Places, and the plans for the building have been approved. The building will cost about $100,000, and will be completed before the close of the year. One-quarter of the capacity of the home will be reserved for poor patients, and an endownment fund of $60,000 is at present being raised to provide for their care. The institution will be under the immediate charge of Dr. J. B. Mattison. The Board of Directors includes the Rev. Dr. Charles C. Hall, the Rev. Dr. R. R. Meredeth, Dr. J. O. Wilson, Dr. A. J. C. Skene, the Rev. Dr. Charles H. Hall, Dr. John C. Shaw, Gen. C. F. Christensen, Dr. Allan McLane Hamilton, and Dr. George F. Shrady.—*Medical Record.*

Dangers of Sulphonal.—

Although sulphonal is probably one of the most efficacious,among the hypnotics recently introduced, the series of cases published by Bresslauer, of Vienna, show clearly that it has serious dangers. The degree of peril is difficult to estimate, as the patients were lunatics, and were also apparently feeble; but the fact is significant that out of seventy-seven patients who were treated with the drug, no less than seven showed serious symptoms, and in five of them there was a fatal termination. It ought to be mentioned that the patients had been taking the drug for a considerable time in good doses, and had borne it well until symptoms of disturbance set in, these being: Great constipation, dark-brown urine, slow or in some cases rapid but feeble pulse, discolored patches resembling purpura on the limbs, and great prostration. In the cases which ended fatally, the cause of death was heart-failure, with œdema of the lungs.—*Boston Med. and Surg. Jour.*

Domestic Science at Wellesley College.—

It has always seemed that a work upon which so much human happiness and well-being depend, and, moreover, a work necessarily devolving upon women, should in female colleges be left to hap-hazard and whim, instead of being converted into a science and an art. Girls are taught everything but the one important and necessary thing they must do all their lives. Wellesley has at last seen the absurdity, and met it by establishing a department of Domestic Science. Although it is only an optional year, put at the end of the course, it is still a good beginning in a good work. The lectures cover such subjects as: The sanitary conditions of a house; the chemistry of food; cooking; nutrition; proper clothing; the art of housekeeping; domestic economy, etc.—*Med. News.*

The Chair of Genito-Urinary Surgery at the University of Pennsylvania.—

Dr. Edward Martin has been appointed to the chair of Genito-Urinary Surgery at the University of Pennsylvania. He enjoys the distinction of being the youngest surgeon occupying a chair at the University. Dr. Martin has been associated with Professors

D. Hayes Agnew and J. William White in their surgical work, and his contributions to genito-urinary surgery, and skill as an operator, have established for him a reputation which many an older man might envy.

A New Artery Forceps.—

Dr. A. M. Phelps, in Medical Record, describes a new artery forceps which he has devised to overcome the objections to previously existing forceps. They have the jaws of the Bergman forceps, a modified hinge of the French, and the clasp of the ordinary forceps. These forceps will catch dense tissue, and hold. They are suitable for operating in deep wounds, because the operator cannot tie on to them, and they are as light as the lightest forceps.

The Modern Difference.—

The doctors of the long ago,
With minds upon their patients' pain,
With ready lance were never slow
To bleed 'em in a vein.

The doctors of the present day,
Who count upon their patients' "payin',"
Oft find their efforts—so they say—
To bleed 'em are in vain.

The History of Tuberculin.—

In four acts:
Act 1—Eureka.
Act 2—Vici.
Act 3—Ave, morituri te salutant.
Act 4—De mortuis nil nisi bonum.
Epitaph—Fuit.

—*Medical Press.*

Profits of Physicians who Examine for Life Insurance.—

Physicians of this country are paid annually nearly a million and a half dollars for medical examinations for life insurance companies. Three companies pay over one quarter of a million each.

Dr. George M. Gould the New Editor of the Medical News.—

With the May 30th number of the Philadelphia Medical News, Dr. George M. Gould assumed the editorial management.

Therapeutic Brevities.

Chloride of Gold in Lupus.—Dr. J. Rüsin (Meditzinskoïe Obozreniё, No. 5. 1891, p. 509) reports the case of a peasant woman, aged 40, with extensive lupus of thirteen years' standing, successfully treated by the subcutaneous injection of a one-per-cent. solution of chloride of gold in combination with a one-per-cent. solution of cyanide of potassium. Nearly the whole face, nose, and forehead were involved, the cheeks, forehead, chin, and hard palate being studded with ulcers, the discharge from which contained tubercle bacilli. In all six injections were given in the course of eleven days, the total quantity of either of the salts amounting to $\frac{88}{1000}$ grain, the individual doses of the chloral varying from $\frac{1}{1000}$ to $\frac{1}{100}$ grain, and those of the cyanide from $\frac{1}{1000}$ to $\frac{1}{125}$. On the second day of the treatment, the subjective state markedly improved; on the third, the swelling of the face subsided, some old scars began to shed cuticle, and a labial ulcer distinctly decreased; on the sixth, some ulcers on the cheeks and hard palate commenced to heal, while the facial tumefaction and pain disappeared altogether; on the twelfth, several ulcers soundly healed, and the remaining ones became clear and covered with healthy granulations. Of accesory phenomena, there were observed a kind of intoxication, drowsiness, rigor, and slight elevation of temperature. These symptoms made their appearance on the fourth day of the treatment, shortly after the injection of $\frac{1}{125}$ grain. They disappeared spontaneously the next day.

The Treatment of Chronic Ulcers.—Dr. J. M. J. Finney, of Baltimore, states that he has obtained the quickest and best results from multiple deep crucial incision through the base of the ulcer. This is done in the following manner: After producing either a local anæsthesia with cocaine, or the primary stage of general anæsthesia, the incisions are made deep enough to go through the layer of dense fibrous tissue underlying the ulcer, and should extend far enough beyond the edges to reach healthy tissue. If there are any large veins in the immediate neighborhood of the ulcer, they should be cut through. The succeeding hæmorrhage, which is often quite profuse, and rather beneficial than otherwise, is easily controlled by pressure with a snugly applied bandage. In rare instances it may be necessary to control the hæmorrhage by a ligature or stitch. A ten-

per-cent. ointment of iodoform and vaselin is then applied, which is allowed to remain for three or four days, and then renewed.—*Maryland Medical Journal.*

Antidote to Rattlesnake Poison.—A correspondent of the Botanical Gazette of Crawfordsville, Indiana, Mr. F. D. Kelsey, states that a native plant of Oregon and Montana, *Hieracium Scouleri*, Hook., has been successfully used in that region as a safe and sure cure for rattlesnake bite. The plant is taken up whole and fresh, though he believes it can be made into a pharmaceutical preparation, such as a powder, or a decoction, or an extract. The plant is bruised and washed, and then gently steeped in milk. This, after straining, is to be drunk in large quantities; and it is stated that several patients who have been thus treated have recovered. An allied species, *Hieracium venosum*, L., is known in the United States as "rattlesnake weed," and it is stated to be a well known fact that deer, antelopes, and other animals, when bitten by rattlesnakes, seek relief in eating some weed known to the hunters in early days.

Hæmocyne (the Serum of Dog's Blood) in the Treatment of Tuberculosis.—Héricourt, Langlois and St. Hilaire (Gaz. Méd. de Paris, 6, 1891) had made 150 injections of from one to three cubic centimeters (fifteen to forty-five minims) of the serum of dog's blood in the treatment of a number of cases of phthisis. The injections were made in the lumbar region at intervals of two or three days, and were, as a rule, unattended with local or general reaction. Of the four cases reported, two had both pulmonary and laryngeal phthisis. In these two the condition of the larynx improved and the voice became stronger. In all the appetite improved, the cough and expectoration diminished, the night-sweats ceased and the weight increased. The physical signs underwent little change.

Indigo as an Emmenagogue.—J. L. Jones, M. D., of Bells, Tennessee, reports the results of employment of indigo as an emmenagogue in thirteen cases. Of these it was efficient in all but one, and that ultimately proved to be a case of pregnancy.

During the administration of the drug the os uteri becomes soft and patulous, admitting the end of the index finger. There is often a serous discharge from the vagina. The urine becomes brownish green in color, and its odor is offensive. The stools are watery and offensive.

Therapeutic Application of Cyanide of Gold.—Cyanide of gold is a yellowish, crystalline powder, without taste, insoluble in water, alcohol and ether. It has been given for the cure of scrofula, phthisis and amenorrhœa, in the following formula, by Oesterlen. The dose is from $\frac{1}{50}$ to $\frac{1}{10}$ of a grain.

℞ Cyanide of gold, 2 grains.
Chocolate, 1½ ounces.

Make into twenty-five powders, and give from two to four each day.

—*La Médecine Moderne.*

A Cure for Hydrocele.—Prof. John A. Wyeth treats hydrocele by injections of pure carbolic acid. All the liquid must first be drawn off with an aspirator. About thirty minims of carbolic acid is a sufficient quantity to sear the sac. This is not as painful as might be supposed. The first effect is to cause swelling, which soon subsides. In fifty operations two cases only have failed to be cured by the first injection.—*Medical Summary.*

Reconstituent Mixture.—

Fresh beef blood, defibrinated,
Extract of malt, ää 25. grammes.
Glycerin,
Alcohol, ää 75. grammes.

Mix. To be taken at each meal, increasing the dose progressively from a half-teaspoonful to three tablespoonsful for adults, and from three to ten drops for infants.

—*Mercredi Médical.*

Cholagogue Tablets.—

℞ Sodii benzoatis,
Sodii salicylatis,
Rhei pulv., ää 1 drachm.
Ext. nucis vomicæ, 5 grains.
Ft. tabellæ no, xx.
Sig. One at each meal.

—*La Méd. Mod.*, May 7th, 1891.

Viburnum Prunifolium in Leg-Cramp.—The specific tincture of viburnum in 10 drop doses thrice daily has been found of value in cramps of the legs.—*Medical Summary.*

Medical Progress.

Bath Lift for the Sick and Paralyzed.—Dr. S. A. K. Strahan has described, in the London Lancet, a bath lift for the use of the sick. Our engraving shows the operation of the device, which the Doctor indorses in the following words:

BATH LIFT FOR THE SICK AND PARALYZED.

"This bath lift, to which I would call the attention of the profession, was designed with a double object: (1) To prevent those accidents which from time to time occur during the bathing of the paralyzed and otherwise helpless, and make the bathing of the most helpless patient, by a single nurse, at once possible and safe, and: (2) With a view to the better carrying out of prolonged immersion—a mode of treatment frequently resorted to at present in various diseased conditions. The accompanying diagram gives a very good idea of the apparatus. It consists of a light, rigid frame supporting a strong net, and raised at the end to form a pillow. This net can be elevated to the level of the top of the bath, and lowered at will, by means of the handles attached to the revolving bar. A rack-and-pinion arrangement makes it impossible for the net to 'go down with a run,' and the bent crossbars (shown through the net in the engraving) keep the net three inches from the bottom of the bath-tub when at its lowest. In use, when the patient is brought alongside the bath, the net is raised, the patient comfortably placed thereon, and gently lowered into the water prepared for him beneath. Bathing over, the net is raised again to the level of the top of the bath, the patient rubbed dry, and prepared for bed. Nurses and others who have, single-handed, attempted to lift a helpless person from the bottom of a bath, will be able to appreciate the usefulness of this contrivance. The advantages of the lift in cases of prolonged immersion are many, not the least of which is, that the patient is supported in mid-water, his weight being equally distributed, and no portion of his body being allowed to come in contact with the bottom of the tub. Should the patient be delirious or maniacal, the limbs can easily be secured to the net, and all dangerous struggling obviated. There is sufficient space between the edge of the net and the side of the bath to prevent injury to the fingers, should the bather grasp the rods. The apparatus can be made to fit any size or shape of bath, and can be fixed to an ordinary bath in a few minutes. It is also to be noticed that the net and revolving bar can be removed in a moment, so that in a private house the bath may not be monopolized by the invalid. The machine should, I think, prove of great value both in the private house and in the public institution."

Traumatic Lesions of the Spine, occasioned by Railroad and Other Injuries: Their Ætiology, Pathology and Diagnosis.*—The essayist on this subject dealt with it from a surgical standpoint exclusively, and, among other things, spoke with special emphasis on those lesions occurring in the various regions of the spine which may induce crippling effects, *without* any association or implication of the elements of the cord; noteworthy among which are those neuroses arising from injury of the peripheral nerves, the vascular ligamentous, osseous, synovial, or tendinous structures.

A most careful survey was made of the anatomical architecture, the physics of spinal movement; and the complex and intricate physiology of function was most minutely analyzed and exhaustively considered.

Dr. Manley, at the very outset, took the

* Abstract of paper presented to American Medical Association, at Washington, May 5th to 8th, 1891. By Thomas A. Manley, A.M., M D., New York.

ground that as an ætiological factor, in spinal injuries, a railroad accident possessed nothing peculiar or characteristic; that there was nothing from a psychological or physical standpoint to *support* the assumption that there was, or ever can be, *anything* entitled to the designation of "railroad spine." He maintained that, in the cases cited by Erichsen in defence of his theory, there was not a scintilla of proof that the railroad accident was in any way responsible for the neuroses which he set down as being dependent on it. He maintained that the clinical histories alone very strongly indicated this. In the first place, because it appears that his female patients were hysterical, and the men were of a neurotic tendency. Besides, it is a well-known fact that serious organic lesions of the medulla spinalis are almost invariably either incurable or fatal. So many of Erichsen's patients recovered, that no opportunity was offered to demonstrate pathological changes by autopsies.

On the other hand, Dr. Manley said that his experience in dealing surgically with traumatic lesions, led him to accept unqualifiedly the dictum of Dr. B. A. Watson, of New Jersey, viz.:

In serious injuries of the spine, the local and constitutional symptoms resulting were, always, in direct proportion to the extent of spinal lesion and pathological changes existing after the accident.

In discussing the pathological mutations observed after a severe injury to the cord, followed by hæmorrhage, congestion or inflammation, Dr. Manley said there was almost invariably associated with spinal injury very severe pain in the back; the tissues overlying the vertebræ being thickened, indurated and œdematous. This was easy to explain, when the vagaries and peculiarities of the rachidian circulation were borne in mind; and, besides, it aided in elucidating the *modus operandi* of secondary spinal infection, wherein the first brunt of the injury is borne by the soft parts; but later, meningeal troubles arise from infection, being propagated through the lymphatics or centripetal vessels inward.

In considering the question of spinal hæmorrhage, he said a wrong impression commonly obtained in connection with the pathology of this subject; first, with respect to the source of the hæmorrhage; and, secondly, its situation.

It had been said that the effused blood was arterial, and that it was always intrameningeal. The speaker said, as a matter of fact he had always found the blood venous and coming from the meningo-rachidian veins. Its situation, when in sufficient quantities to compress the cord, was always external to the dura, but within the theca. Next to direct bone pressure, he had found spinal hæmorrhage the most prolific cause of meningitis, through long-continued pressure and irritation.

Numerous cases were cited, from the author's own practice, illustrating the various phases of injuries to the spine resulting from railroad collisions, blows, twists, and falls, on the spine; of the latter, in a few in which the patient fell, the brunt or the momentum, being borne by the nates, and others, in which force, primarily, was borne by the head, neck or shoulders.

The main drift of the article, however, was evidently directed toward calling attention to those lesions arising primarily or secondarily from injuries to the back of an extrinsic origin, those designated according to the structure involved, and the grade or variety of pathological process presented, such as myopathies, neuropathies, trophic and amyotrophic changes, cellulitis, osteitis, periosteitis, synovitis, arthritis, ulceration or suppuration.

Myelitis as a primary disease following spinal injury was denied.

The writer maintained that, it was only after the circulation was impeded by inflammatory changes and that the nutrition of the cord was seriously compromised, that its nerve-cylinders and cellular elements underwent degenerative changes and softening.

Spinal anæmia, as a sequence of spinal injury, likewise was denied with emphasis.

It was claimed that this disease had no pathological foundation whatever; that there was no proof of the existence of a local diminution of the quantity of blood in the spinal cord, when other organs were amply supplied; but that, as in cerebral anæmia, it could occur only as a permanent condition when there was constitutional anæmia, either by local abstraction of blood or its general impoverishment, or by influences acting on the general economy; the treatment of it by ferruginous and restorative preparations thereby indicated its real nature, so that instead of being a primary, local malady, it was simply the index of reduced health.

In approaching the subject of diagnosis, Dr. Manley strongly insisted on the importance of proceeding with great circumspection, inquiring cautiously into the patient's general history and being on the alert for any trace of syphilis, particularly if the patient were young and the interval of time was considerable from the date of injury and the onset of symptoms.

Physics, independent of electricity, affords little positive aid in the diagnosis of spinal disease, and in many of the worst cases there is no deformity, distortion, fullness or atrophy, while not infrequently we will see the most marked displacement of the bony structures without any marked impairment of function in the cord.

We have not space to give at length more than an outline of this very valuable brochure of spinal traumatism, which we are certain will be read with profit by any one required to practice railroad surgery or treat mechanical lesions of the spine.

Phenocol Hydrochlorate, a New Antipyretic and Anti-Rheumatic Remedy.—The Deutsche Medicinische Wochenschrift for April 9th, 1891, contains a paper by Surgeon-Major Hertel, attached to the clinic of Privy Councillor Gerhardt, detailing the results of experiments made in the clinic with a new drug, a sample of which had been received in February from the Schering chemical manufactory. Phenocol hydrochlorate is described by its manufacturers as a white, micro-crystalline powder, a salt of hydrochloric acid with amido-acet-para-phenetidin. The base is derived from glycocol, or amido-acetic acid and phenetidin, the water being abstracted. The new combination is to be considered as a phenacetin, which, by the introduction of the salt-forming amido group in the acetyl element, is rendered readily soluble The hydrochlorate is soluble in about 16 parts of water at 17° C. (62.6° F.), and the solution is of neutral reaction. The salt crystallizes out of hot water in cubes similar to those of analgesin; out of alcohol, in which it readily dissolves only by the aid of heat, it crystallizes in needles. The pure base, phenocollom purum, may be obtained by the action of ammonia, caustic alkali, or alkaline carbonate upon a solution of the salt, and occurs in the form of white matted needles, which contain one part of water of crystallization.

Hydrated phenocol melts at about 95° C. (203° F.); the anhydrous form at 100.5° C. (212.9° F.). Since the pure base dissolves with difficulty in cold water, its combination with hydrochloric acid is better adapted for use in medicine. Alcohol is a fairly good solvent for the pure base, of which, however, little is taken up by ether, benzol, and chloroform. Phenocol is tolerably stable when boiled in a dilute solution of an alkaline caustic or carbonate, though prolonged boiling causes it to separate into phenetidin and glycocol. Similar is its behavior toward weakened acids. After long boiling in concentrated hydrochloric acid, it is partly split up into phenetidin hydrochlorate and glycocol.

According to Professor Kobert, of Dorpat, phenocol exerts no deleterious influence upon animals, and does not affect the composition of the blood. Professor v. Moëring, of Halle, observed no injurious consequences follow the administration of 1.5 grammes (23 grains) of the hydrochlorate to a rabbit. Experiments in typhoid fever and pneumonia have shown that phenocol is a superior antipyretic, which, in doses of 15 grains, reduced the temperature three degrees or more without causing collapse or cyanosis. There was no more sweating than after large doses of analgesin, or 12 to 15 grains of phenacetin. From communications received from numerous physicians in private practice, the hydrochlorate of phenocol, in doses of from 8 to 15 grains, may be regarded as an excellent nervine and anti-neuralgic.

In consequence of these favorable reports, Dr. Hertel was induced to make trial of the new remedy in a number of febrile and rheumatic cases. He at first gave it in watery solution in doses of from 8 to 15 grains. The cases which form the basis of his report, the histories of which are given with sufficient minutia, were 8 in number,—4 of advanced phthisis, with hectic fever; 3 of acute articular rheumatism; and 1 of (so-called) gonorrhœal rheumatism. In none were ill-effects upon circulation or respiration apparent, but in 1 case disgust and nausea were excited. The temperature was taken hourly during administration of the remedy. In hectic fever single doses of 8 grains lowered the temperature half a Centigrade degree within a short time. The same quantity thrice repeated at hourly intervals caused a reduction of one degree, but the effect was transitory. Fifteen-grain doses generally reduced the temperature a degree to a degree-and-a-half, within a few hours, occasionally within one hour. The effect continued for about two hours. When 5. grammes (75 grains) were given during the day in divided doses, an almost complete defervescence was generally the result. It seemed, however, that the effect was less decided upon high evening temperatures than upon day temperatures. The re-ascent of temperature was in no instance followed by any untoward manifestations, such as chill or profuse sweating. In the cases of acute inflammatory rheumatism, in two of which serious cardiac lesions were present, the remedy, in daily doses of 75 grains, proved valuable in alleviation of pain, but had little direct influence upon the

fever. The temperature, however, fell to normal as soon as the articular manifestations and complications were relieved. In one case, after analgesin, sodium salicylate, and phenacetin, had been used without much benefit, prompt amelioration followed the employment of phenocol, but the symptoms recurred during a period of five days, after the supply of the drug had been exhausted. In the first attack joint-pain disappeared after four days' treatment. The relapse was overcome by 8. grammes, and as the pain vanished the temperature sank to normal. In another case pain was abolished by the seventh day, and in a third, a relapse, but little suffering was left upon the fourth day, and it had entirely disappeared the following morning, while the temperature had descended to the normal. The case of gonorrhœal rheumatism was uninfluenced by the drug, either as regards fever or pain in the joints.

Phenocol seems to have no injurious effect upon the kidneys. After ingestion of about five grammes, the urine assumes a brownish or blackish-red color, similar to that produced by hydrobilirubin or analgesin. The coloration usually deepened when the urine was left long exposed to the air. Upon the addition of tincture of chloride of iron, the color became still darker. This shade was somewhat lightened by the action of concentrated sulphuric acid, though it did not disappear, and in transmitted light assumed a peculiar greenish hue. The drug seems to be removed from the system very rapidly, judging from the fact that twelve hours after discontinuance the reaction with the tincture of iron was no longer obtained.

The aqueous solution has a salty-bitter taste, and is at first of neutral reaction, but was often found to be feebly alkaline at the end of the second day, while other solutions sometimes became strongly alkaline. It is possible that the changed reaction and taste may account for the nausea excited in one case, since in no other instance was the slightest digestive disturbance occasioned. On account of this chemical alteration the remedy was afterward administered in powder form.

We have to thank Dr. Hertel for a model report, in which essential facts are clearly presented, and prolixity avoided. Though the number of his cases was small, and it is much to be regretted that among them was none of typhoid fever or croupous pneumonia, yet the effect of the remedy was narrowly observed from hour to hour during a month's time, and we can cordially re-echo the expression with which he closes his paper, that the trials thus far made have been encouraging and warrant further experiments. The acknowledged drawbacks to the use of the products heretofore in our hands, have led therapeutists to maintain an eager outlook for a substance which shall have, if possible, their advantages without their defects.—*Medical Bulletin*, June, 1891.

THE PRESENT STATUS OF THE TREATMENT OF URINARY CALCULUS.—Every few years we find the practice in any particular form of disease undergoes radical changes, so that the methods in vogue in the near past are almost entirely superceded by newer and more modern ones; or possibly, the profession reverts to an operation largely practiced in the past, one which has remained quiescent for a number of years, only to be again brought forward.

In regard to the affection under consideration, the modern (present day) sentiment appears to be as follows:

1. Wherever possible, resort to litholapaxy.

2. If litholapaxy is contra-indicated by a sacculated bladder, a high degree of cystitis, stricture of the urethra, or an irritable, contracted bladder, one of the cutting operations must be performed.

3. If the stone is not very large, and can be extracted by that method, the median perineal method is preferred.

4. If the stone is very large, or if there is reason to suspect the co-existence of tumors of the bladder, or any reason calling for a complete exploration of the interior of the bladder, resort should be had to supra-pubic cystotomy.

5. The existence of cystitis, or other necessity for drainage of the bladder, calls for the lateral operation.

From the above summary it at once becomes evident that the range of lateral lithotomy has been largely curtailed, while that of litholapaxy has been wonderfully increased. In fact, the crushing operation is now almost universally recognized as the operation of choice whenever possible. The grounds upon which this decision rests are that the crushing operation is less risky; it is applicable to all ages; the time of convalescence is very short compared with the other operations, and the mortality is much lower.

The chief objection against litholapaxy is the possibility of leaving some fragment of the stone in the bladder, to act as a nucleus for a new stone. This oversight has frequently occurred, but the fragment has

always been detected early, and is easily removed by reintroducing the lithotrite.

The dangers and difficulties of the median operation are usually slight, but its range of successful application is limited. The time necessary for the healing of the wound is an objection.

Supra-pubic cystotomy is somewhat difficult of performance, more paraphernalia are required, and the dangers of complications are perhaps greater than those of any other operation for the relief of this trouble.

At present the tendency is to almost entirely banish lateral lithotomy from the list of surgical procedures applicable to this affection, preference being given to either the median or supra-pubic operation. Time only can determine whether this condition of affairs will continue or not. Some surgeons still cling to the lateral incision, and are loath to discard it.

In this paper we have endeavored to present to our readers, in as concise form as possible, the views held by the leading surgeons of the day, and have aimed to avoid expressing any prejudiced or biased views. To sum the whole matter up in a few words, we can say—this is an age of litholapaxy.—*Cincinnati Lancet and Clinic*, May 30th, 1891.

Cactina a New Cardiac Stimulant.—Dr. O. M. Myers contributes to the New York Medical Journal, June 13th, the results of his experiments with cactina, the active principle of *Cereus grandiflora*. His conclusions are, cactina in therapeutic doses increases the musculo-motor energy of the heart, probably through its influence upon the intracardiac motor and accelerator ganglia, in consequence of which the cardiac impulses become regular and much stronger. It elevates the arterial tension, increasing correspondingly the height and force of the pulse wave. This is produced by: *a*, Increased cardiac action: *b*, Stimulation of the vaso-motor center at the base of the brain. It influences the nervous system by its direct action upon the motor centers of the spinal cord, thus increasing the reflexes and elevating the general nervous tone. Herein cactina resembles strychnine, and other points of similarity are evinced by clinical observation.

Therapeutics.—It logically follows, if conclusions as to its physiological action are correct, that in cactina we have a powerful cardiac tonic-stimulant. Clinical observation teaches that its greatest value is manifest in functional disturbances of the heart, as simple dilatation and cardio-muscular atony (resulting from deficient innervation and nutrition) without organic lesions. If valvular disease exists, accompanied with dilatation, the drug would seem to be clearly indicated. In conditions of cardiac and general muscular relaxation with impared nerve energy, and in cases of "irritable heart," "tobacco heart," etc., the drug accomplishes excellent results; probably by: *a*, Stimulation of the spinal motor-nerve centers: *b*, Constantly stimulating the heart muscle to action, thereby increasing its nutrition and development.

A special indication for its use is during the critical periods of adynamic fevers, as it combines the elements of a heart and spinal motor stimulant.

Unlike digitalis, cactina may be administered continuously without fear of exciting gastric disturbance, and the objectionable cumulative action of the former drug is entirely absent. In short, cactina may be employed with benefit in all varieties of functional cardiac and circulatory disturbances and in organic heart disease, except in cases of mitral stenosis, where digitalis is to be preferred on account of its power of prolonging the diastolic period, thus affording the ventricle power and time to entirely empty itself. Per contra, in aortic insufficiency, the short diastole produced by cactina allows no time for regurgitation of blood into the ventricle, whereas digitalis, by prolonging the diastolic period, favors just what we should seek to prevent.

Preparations of *Cereus grandiflora*, *C. bonplandii*, *C. macdonaldii*, and other allied varieties, have long since been employed in medicine, but the results have been uncertain. This is accounted for by the fact that the yield of active principle varies greatly in the different species of the plant and in the same species in different habitats. Under such circumstances the strength of preparations would necessarily be so inconstant as to make them unreliable for use. The same may be said of many other valuable drugs, such as cannabis Indica, ergot, etc., of which two preparations of the same strength can hardly be found. This difficulty has been entirely obviated in the case of *Cereus grandiflora*, for, by the isolation of its active principle, we have the means of employing it in constant and definite quantities.

A New Remedy for Asthma.—So many remedies have been lauded for the cure of asthma that the mere mention of a new one seems to be the work of supererogation. The remedy to which the profession is now

nvited is not altogether a new one, but within the past few years it has received little attention. *Euphorbia pilulifera*, a common and well-known roadside weed found growing in certain parts of Australia, is destined to occupy an important place in the treatment of many cases of spasmodic asthma. Articles upon the use of this drug have appeared in medical journals in this and other countries from time to time during the past nine years, and quite a number of practitioners, following the suggestions of these authors, have found *euphorbia* a real addition to our therapeutic resources in this very obstinate affection. Some have gone so far as to claim that in young and robust persons, who will avoid exposure and be careful of their diet, it will practically secure permanent immunity from these troublesome attacks.

Although we have not found it uniformly successful, we are of the opinion that with suitable climatic influences it will prove a remedy of decided service in enabling many persons to ward off frequent attacks, and will also render them less severe than when the ordinary treatment is followed. The method of administration is simple, and consists in giving the fluid extract in doses of from twenty to thirty drops every four hours. It may be used alone, diluted with a small quantity of water, or it can be combined with an equal quantity of glycerin, which renders it less objectionable to the palate. The addition of half the quantity of grindelia robusta, prepared without alcohol, will sometimes add materially to the efficiency of the treatment. The latter combination is quite effective in the treatment of spasmodic or paroxysmal cough, due to a torpid condition of the liver with more or less constipation.

Physiological investigation shows that the coloring matter of the *euphorbia* is carried to the liver, and observers have announced that there is an increased flow of bile. Possibly the coloring matter of the *euphorbia* may have some influence in stimulating the activity of the liver. It should be remarked in this connection that *euphorbia* is not recommended for the emergency, but for the pathological conditions which lead to asthmatic attacks. For the purpose of securing immediate relief to the patient, a hypodermatic injection of atropine and morphine is probably the best, and, if there be no contra-indications, the addition to this, in the form of a solution, of the one one-hundredth of a grain of nitro-glycerin will generally enable the patient to have a comfortable night's rest.—*The Medical Summary.*

Treatment of the Night-Sweats of Phthisis.—Huchard reports in the Rev. Gén. de Clin. et de Thérap., February 4th, the results with many medicaments tried for the relief of the sweating of phthisical patients. Among these may be mentioned lead acetate, tannin, phosphate of lime, ergot, atropine, and muscarine. Of these the two first are unreliable, and are seldom used, and probably atropine sulphate is the most valuable (one-half to one milligramme at night). Phosphate of lime should be given in large doses (one to two drachms daily) to produce anhydrotic effects, and even in these doses it has several times failed. Ergot (fifteen to twenty-two grains of the powder at night) is much more reliable. When the sweats coexist with more or less marked fever, the author recommends the use of quinine combined with ergot.

℞ Quiniæ sulph., gr. xvi.
Pulv. ergotæ, ʒ ss.

Divide into four cachets—two to three to be taken daily.

This formula is specially valuable in phthisis hæmoptysis. Lastly, powdered agaric is an excellent remedy, not equal to atropine, but perfectly harmless, and never causing derangement of digestion. It may well be combined with tannin or belladonna, given in doses of three or four grains.

The same writer speaks very highly of analgesin in the initial fever of tuberculous patients. The older drugs, quinine, tartar emetic, salicylic acid, all fail, or have but slight effect. It is specially in this *initial* fever that analgesin is of great service. One must, however, distinguish between an *analgesic* and an *antipyretic* dose of the drug. To obtain the former effect one would give a large dose (say fifteen to thirty grains) in a short time, but this must not be done if its best action as an antipyretic is desired. It is well for this purpose to use constantly decreasing doses (say sixteen grains, twelve grains, eight grains), taking care to divide them so that at no time during the twenty-four hours is the patient not under the influence of the drug. Used in this way, Huchard declares that analgesin seems to have a *special* action on the tuberculous lesion, and to greatly retard or to arrest its progress.

Professor Combemale has used tellurate of sodium, in phthisical and other sweating. It was first recommended by Neusser who gave one-third or two-thirds of a grain in pill once daily. Combemale gave it up to nearly one grain per dose, and tried its effects in eleven cases. His conclusions are: It is a powerful anti-sudorific; a dose of nearly one grain gives the best results; it gives rise to diges-

tive troubles, and especially to a strong garlic odor in the breath. All the compounds of tellurium cause a very disagreeable odor in the breath, and this must always be a bar to their employment, as it is very persistent and disagreeable.

In addition to the list, sulphonal has been used with success by a few reporters.

Transplantation of Teeth. — In a monograph on this subject, Dr. Julius Scheff details a large number of experiments made on animals, together with histological examinations, which tend to show that, in the majority of instances, the union is periosteal. It may take place by first intention, the alveolar periosteum uniting directly with the cement of the tooth without absorption of the latter; or the periosteal proliferation may produce a more or less extensive absorption of the cement, which if carried too far, may result in extrusion of the tooth. The experiments also demonstrated that the pulp of every implanted tooth becomes necrotic, and this condition may exist, notwithstanding the occurrence of firm periosteal adhesions; or a new tissue may take the place of the necrotic structures. In the dog, this new tissue originates in the pulp canals, and consists of a delicate vascular connective tissue, which differs from the normal pulp by the absence of odontoblasts, or it may result from a proliferation of the periosteum into the pulp canals through openings caused by absorption of their walls. If the latter occurs, the periosteum may undergo osseous transformation, after absorption has ceased.

Of great interest in this connection are the investigations recently made by a Russian physician, Dr. Znamensky regarding the implantation of artificial teeth both in animals and human beings. He experimented with teeth constructed of porcelain, hard rubber, and metal, at the roots of which he made a large number of fine incisions. The process consisted in a proliferation of granulation tissue from the alveolar walls into the fine openings at the root of the tooth, thus holding it firmly in position. It is questionable whether artificial teeth can be embedded with sufficient firmness to withstand, for any length of time, the violence to which they are subjected during mastication.—*International Journal of Surgery.*

Chatinine, Alkaloid of Valerian Root.—M. Waliszewski, a pharmacist of Clichy, has isolated an alkaloid from valerian, and named it chatinine, in honor of M. Chatin, late director of the École de Pharmacie of Paris. To obtain it, he removes from valerian root, by distillation, its valerianic acid and volatile products. Then he exhausts the root by decoction in distilled water, and clears the liquid with acetate of lead. The lead is eliminated by sulphuric acid or sulphuretted hydrogen. The filtered liquor is evaporated to the consistency of a soft extract, which is treated by 90 per cent. alcohol. The filtrate is distilled and the residuum is taken up with distilled water; this product is distilled to the consistency of an extract and treated with bicarbonate of soda and ether; the ether is washed with distilled water; the liquid is now evaporated, and the residuum, which is chatinine, is treated by an acid, preferably hydrochloric. As valerian root contains an ammoniacal salt, which remains with the chatinine during the above operations, the product must be treated with 95 per cent. alcohol, in which the chloride of ammonia remains inssoluble. The chatinine salts have the general characters of the alkaloids, and, like them, are precipitated by picric acid, bichloride of platinum, Valser's reagent, tannin, Bouchardt's reagent, etc.—*Union Phar.*, March 15th. *Répert de Phar.*, April 10th.

The Use of Astringents in Treatment of Eye Diseases.—When you have made the diagnosis sure, and have a case of conjunctivitis to treat, if it be a mild case, restrict your applications to the mild astringent, of which borax, grs. x to ℥ j is the type. When more redness, grittiness and secretion is visible, use sulphate of zinc, never exceeding gr. j to 3 j of water, three or four times a day. In the more severe cases, accompanied with muco-purulent secretion in more or less abundance, use, once a day, a nitrate of silver solution, grs. v to ℥ j of distilled water. Never give this to a patient for home use; while you are daily instilling the caustic solution yourself, let the patient have a mild astringent for more frequent application at his home.

I have said nothing of boric acid, so extensively used by some. It possesses no astringent properties. In the treatment of conjunctivitis, in my hands at least, it has been as inert as rose-water, to which the world attributes so much virtue as an eye application. There is no question about its safety and its innocence as an eye-drop, to which I will add a third quality, its usefulness, unless you prescribe it as a placebo.—Julian J. Chisolm, M.D., in *College and Clinical Record.*

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Original Articles.

BALD HEADS.*

BY ALBERT E. CARRIER, M. D.†

Overlooking the uncovered heads of a large number of people, one may easily arrive at an estimate of the frequency of baldness among the male sex. A woman's *uncovered* head is usually covered, and absence of hair on her scalp is not visible, but the number of bald pates in sight is sufficient to show that alopœcia is not uncommon.

Baldness may be a crown of honor, but its possessor becomes a very conspicuous individual, and if the baldness, instead of occurring in a single spot over the vertex is made up of several distinct and separate patches, it is in the extreme disfiguring. We are accustomed to look upon bald heads as an inheritance of the aged, the result of the general atrophy of tissues occuring at that time of life, and of course, permanent and beyond relief from medication. But, if it appears before the age of forty, it is the result of some pathological condition, that, with proper treatment, would have resulted in a saving of the hairy covering of the scalp.

The enormous sale of nostrums warranted to restore to bald heads a natural hairy covering, is evidence of the fact that alopœcia is not a desirable possession.

To every hair is given a certain period or length of life, which varies from four months to as many years. This may be called the natural life of the hair, and once reached, the hair falls out and is replaced by another, which may grow from the same papilla, or from a new papilla developed by the side of the old one, or from the hair follicle.

In normal conditions of the scalp, each succeeding hair has the same length of life as its predecessor.

Other things being equal, the thicker the hair the longer is its life; and a gradual decrease in the diameter of hairs replacing those that have fallen out, is to be taken as an indication of approaching baldness. The normal scalp covering of hair then depends upon new hairs taking the place of those that fall out, and being of the same size, and having the same length of life.

In health the daily loss of hair varies in number from thirteen to two hundred. Around the border of a healthy scalp, will be found shorter and pointed hairs; normally the term of life of these pointed hairs is less than that of the other hairs, and, in the daily shedding of hair, a regular proportion exists, between the short pointed hairs and the others, of about one to twenty. Any increase of this proportion is evidence of disease. The explanation of this is that these hairs are gradually taking the place of healthy hairs, and, as the disease progresses, they finally yield to the fine lanugo hairs, and, later, complete loss of hair results.

Baldness, occurring in the course of acute diseases, as in erysipelas, syphilis, typhoid fever, eczema and the exanthemata, is usually replaced by a normal hairy covering during, and after, convalescence. Cases occurring over limited areas, as a result of severe inflammation, will be followed by recovery, if the hair follicles have not been destroyed in the process. Acne, and lupus erythematosus, sometimes cause permanent baldness, and late manifestations of syphilis, in like manner, cause a permanent alopœcia.

Congenital baldness is usually a temporary affection, the scalp covering developing between the second and ninth years of life; it is sometimes, however, permanent. Premature baldness dependent upon heredity, is always incurable.

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*Read before the Michigan State Medical Association, June 12th, 1891.

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Interest naturally centres about those cases which are amenable to treatment, and which, experience shows, may be cured. We find they occur in three classes, viz.: Parasitic, seborrhœic, and nervous, which I will briefly consider.

Disturbance of function of the sebaceous glands is the most frequent cause of premature baldness.

Those who have examined cases of severe seborrhœa, with its masses of greasy dirty crusts mingled with hairs, and attended by a disgusting nauseous odor, will not wonder at being consulted regarding its cure; and the probabilites are, with proper treatment, the seborrhœa will be cured, and the hair saved to the patient. I do not know but it would be better if all cases of seborrhœa were of this character. If the disease has existed for some time, it may be noticed that, under the old crusts, the skin is grayish, and gives the appearance of approaching atrophy, the result of simple, constant pressure upon the part, and, if not arrested, it ends in atrophy of hair papillæ and permanent baldness.

Another form of this disturbance has a very different appearance, and makes its approach in a most insidious manner, so that medical aid is not sought until late in the disease, and when the rapid loss of hair calls attention to the trouble. The condition I refer to is *alopœcia furfuracea*. It begins between the ages of fifteen and twenty-five years, with increased degeneration of fine bran-like scales from the scalp; the scales are abundant, filling the hair and falling over the clothing. All parts of the scalp are not affected, but principally the vertex and sides, sparing the occiput.

The scales may be removed by means of oil, or soap and water, but in a few hours the surface will be again covered by them. The skin is healthy in appearance under the scales, and has its epidermis intact. This desquamation may continue for a number of months, or even years, before marked loss of hair will occur.

There are no subjective symptoms calling for medical assistance; at times there is slight pruritus, but sooner or later it will be noticed, with each dressing of the hair, that a constantly increasing number of hairs are combed out; usually within one year it will be noticed the hairs are not being replaced, and a marked thinning will be found a little back of the anterior border of the hair, and another spot near the vertex, these two spots finally shedding all strong hairs; and around the borders of the bald patches the hair will be noticed to be thinner.

As the *rete* cells are continuous from sebaceous gland to outer root sheath, and fatty matamorphosis of these cells in the gland is the cause of the desquamation, it is but reasonable to suppose an extension of this process to the root sheath, as the cause of the loosening of the hair and final destruction of papilla. The disease is more often met with in men. Microscopic examination of the skin from a patch of *alopœcia ptyriodes*, shows thinning of the true skin, while the hairs show atrophic roots.

The disease sometimes occurs as a sequela of variola, continued fevers, syphilis, etc.

Alopœcia areata is characterized by the sudden or gradual falling out of hair in patches, varying in size and usually circular in outline; the hair may fall out at once, and the size of the patch be bordered by hair, and never increase; or the loss of the hair may be slower, and the patch gradually increase in size. The denuded surface, in either case, appears perfectly normal; it may look a little whiter than the surrounding skin, and at times the patches may seem a little depressed; but there are no vesicles, pustules scaling, etc., and the subjective symptoms are practically *nil*. At times slight itching may occur; after the disease has lasted a certain length of time, the skin shows signs of atrophy.

Young people are attacked by preference. Some cases are ushered in with evidences of a general disturbance, manifested by anorexia, lassitude, and sometimes by severe neuralgia; when the neuralgia is one-sided, the loss of hair occurs on the side attacked, but in the largest number of cases no such symptom is present, the patient appearing in most robust health.

In old patches reddened by irritation, the redness remains for a longer time than it does in the healthy skin, showing some disturbance of the circulation, but the microscope reveals only an atrophied condition.

Views vary as to the cause of the disease, between its being a tropho-neurosis or a parasitic affection. I believe the largest number of cases of *alopœcia areata* are parasitic. Those interested at all in statistics regarding frequency of this disease in all countries, will have noticed that when *tinea tonsurans* is prevalent, there will be many cases of *alopœcia areata*. Hebra's school is antagonistic to the theory of parasitic origin of the disease, but it is found in Germany there are relatively few cases of this disease, or of scalp ringworm; while in France both affections occur frequently, and the medical authorities incline to a parasitic origin. Undoubtedly, cases occur from organic or functional disturbance of the nervous system, as when the alopœcia is general, or ushered in and attended by severe neuralgia, and there are cases where these lesions, while numerous, are very small, and depressed below the surface, the depression being marked and sharp-bordered. The alopœcia, I believe, in this last class, will always remain. But all these cases, and those resulting from injury to nerves, will account for less than one-fifth of all the cases of *alopœcia areata*. During the past year I have treated an unusual number of cases of ringworm of scalp and body.

The characteristic appearance of scalp ringworm, with its broken, twisted hair, scales, etc., would give little difficulty in the way of diagnosis, but when other children in the same family, or neighborhood, show cases of *alopœcia areata*, with perfectly smooth white patches, the hair falling rapidly, the individuals in apparent perfect health, and none of the common symptoms of ringworm, we are still warranted, I believe, in ascribing their causation to a parasite, at present unknown. Two cases, under my care at St. Mary's Hospital Free Dispensary, will serve as an illustration:

S. B., æt. 10, healthy, well-nourished boy, parentage English, came to me with a well-marked patch of *tinea tonsurans*, the size of a dollar. Microscopic examination showed presence of the trichophyton. A month later an older brother came to me with two patches, size of a half-dollar each, white and smooth, perfectly free from scales, broken hairs, etc; more than this, the hairs came out suddenly; he was in perfect health, no evidence of nerve disturbance.

Repeated examinations of hair failed to show the trichophyton. Was the second case parasitic? I treated both with parasiticides, extracting hairs, etc. The case of undoubted ringworm is under treatment yet, while the doubtful case was cured within three months.

Observers have found so many parasites as the cause of *alopœcia areata*, that discredit has been cast upon the theory of parasitic origin; but my study of numerous cases, although unable to find a parasite that is constantly present, leads me to the conclusion that a fungus is the cause, and from frequent observance of cases like these narrated, I believe it to be a parasite allied to the trichophyton. It may be situated in other portions of the skin than hair or hair follicle; at all events, I find nothing to contra-indicate a parasitic origin, and cases occurring in otherwise perfectly healthy individuals, I treat with parasiticides.

Of *tinea tonsurans* as a cause of baldness, but little need be said, for if the disease does not pass to the kerion stage, new hairs will replace those that fall, and even without treatment the disease will cease when the patient reaches adult life; with severe treatment (croton oil, for example), destruction of hair may result. As long as hair papillæ evidence a capacity to grow hairs, even if they are the most minute lanugos, there is possibility of cure. I have stated that many cases of baldness occur in otherwise perfectly healthy individuals, but for this very reason one should be the more thorough in examination, for constitutional disturbances, even the slightest ailment, should be thought important, and treatment directed to its removal. I believe that attention in this direction should precede all other medication for restoration of the hair, I care not whether the case be parasitic, nervous, or seborrhœic in origin. Much of the tediousness of these cases is due to the overlooking of coincident, slight ailments.

I shall call attention, in this paper, only to local medication.

The mild form of seborrhœa (*alopœcia ptyriodes*) from this fact (mildness) is often neglected until treatment is valuless. It should come under treatment early in its course, before the hairs begin to fall out,

and any case of dandruff or seborrhœa should, when first noticed, be most thoroughly treated. Patients do not like the care and annoyance, or to take the time, to follow the necessary treatment. There is no disease which so taxes the patience of patient and practitioner. In the first stage of alopœcea we have to overcome the fatty metamorphosis of gland cells and consequent formation of scales; but first the scalp must be cleansed by soaking over night with some bland oil, keeping it in constant contact by covering the head with a flannel or oil-silk cap.

The oil must be freely and thoroughly applied; in from twelve to twenty four hours the scales will become brittle and then the scalp should be thoroughly washed with soap and water, douching afterward with hot, followed by cold, water.

After drying with a soft towel, the scalp is ready for some stimulating application; my preference is for those that can be used as lotions, rather than as ointments.

These applications empty the glands of the accumulated sebum, increase the blood supply furnishing needed nourishment, and stimulate muscular activity. The mildest remedies that will accomplish the desired effect should be used, as it is not severe but mild stimulation that is sought. The medicines used for this purpose may be corrosive sublimate, two to five grains to the ounce; carbonate of potassa, five to fifteen grains to the ounce; equal parts of glycerin and water; naphthol, ten to fifteen grains to the ounce; or we may use ether, tar, sulphur, etc. I lay less stress upon the choice of a remedy than I do upon its thorough application and persistence in use. Following the application of any of the medicines named, it will be noticed that the scalp is dry and the hair lustreless, evidencing a need of fat, which we must supply by external application, *not to the hair*, but directly to the scalp, by separating the hairs, applying the fat by means of a small tooth-brush, rubbing it well in.

The treatment I have outlined should be repeated every second or third day, until it is noticed the scales do not form as rapidly as formerly, when the intermissions may be longer,—say every third day, then once a week, but not ceasing altogether for several months. Hairs will cease falling as soon as we have overcome the seborrhœa, but in many follicles only the fine lanugo hairs will be found; treatment to induce a stronger growth should then be begun, by first plucking out the soft, fine hairs; under no circumstances cut them. Now follow the epilation by applications to stimulate hair follicles, using, for this purpose, tannin, (ten grains to the ounce of glycerin), or quinine, (ten or fifteen grains to the ounce). But probably the best of all is common salt, fifteen to forty grains to the ounce of water. The strength of any of these applications should be as mild as can be used and produce the desired irritation. The scalp should be oiled after each treatment.

Galvanism is also a remedy of great value, using a mild current (2 to 4 milliamperes) for ten minutes each day.

There is one remedy which, internally administered, seems to have some little influence in stimulating hair-growth, namely, pilocarpine. The muriate may be given in doses of one-tenth to one-sixth grain, twice daily.

With persistent treatment, as outlined, I believe most cases of baldness dependent upon *alopœcia furfuracea* may be prevented. A guarded prognosis, however, should be given in every case, for even promising cases will at times, in spite of all treatment, end in permanent alopœcia.

Baldness due to functional disturbance of the nervous system (some form of *alopœcia areata*) usually ends in recovery.

The brilliant results of treatment in some of these cases, are entirely independent of any medication that may have been used. The tediousness of recovery in other cases, and especially those in which alopœcia is universal, calls for varied and energetic treatment. Massage, two or three times a week, I have found of great benefit; also douches of hot water, followed at once by douches of cold water, and then using a solution of salt in water, following with application of some fat. Of great value is Galvanism and Faradization, using mild currents (2 to 4 milliamperes), in five- to ten-minute *séances* every day. The various stimulants used in the treatment of *alopœcia furfuracea* will also be found useful. Cases may last

for months, or even years, and should never be considered incurable as long as the finest lanugo hairs are discernible. Cases due to traumatism, ending in destruction of nerve, are incurable; but, taking all forms of nervous *alopœcia areata*, we find they form only 12 per cent. of all cases; the balance I believe to be parasitic, and, in addition to other medication, call for parasiticides. It is found very difficult, in ringworm of the scalp, to bring the parasite and parasiticide together, although we know the parts attacked by the fungus; and as, so far, we have not been able to locate the parasite of *alopœcia areata*, treatment is largely empirical; but I believe the good effects of treatment by strong applications of the bichloride of mercury (five to ten grains to the drachm), and the stronger current of electricity, are due to their destroying the parasite. By all means, epilate before using whatever remedy is selected. Blistering with oleate of mercury often gives good results.

Tinea tonsurans will cease when the individual becomes an adult; and unless the disease has ended in kerion stage, causing destruction of hair papillæ, the baldness will not be permanent. The treatment of scalp ringworm is tedious, but cure will follow if it be persistent. It consists in epilation every third day at least, and then using one or other of the parasiticides already mentioned. The best, I think, is beta-naphthol, ten to twenty grains to the ounce of alcohol.

In conclusion:

First. Alopœcia occurring before the age of forty, will, in a large proportion of cases, end in recovery if properly treated—cases due to heredity, or where the hair papillæ are destroyed, excepted.

Second. *Alopœcia areata* is, in large proportion, parasitic, with the parasite and its habitat undiscovered; the parasite is probably allied to the trichophyton.

Third. Treatment, in any case, should begin early, and be persistently carried out, more being accomplished by thoroughness than by choice of remedies.

Fourth. An unfavorable prognosis should never be given as long as hair follicles show even the finest lanugo hairs.

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EPILEPSY.*

BY FRANK P. NORBURY, M. D.

Since the time of Hippocrates, epilepsy has been a subject of much speculation, and in the earlier centuries of medicine, a mysticism. The progress of science has now, however, up-rooted these absurd and unreasonable conjectures, and placed it upon a sound and rational basis.

The theory that epilepsy is dependent upon cerebral irritation is more indisputable, though the definition of the disease is yet in dispute. Gowers,† Jackson,‡ and others, hold the essential phenomena lie in the nervous discharge, or simple liberation of energy of nerve elements, the convulsion; while Christian § and other eminent authorities believe the convulsion is not pathognomonic, but that the essential sign of the disease is in the loss of consciousness.

I will not enter into a discussion of the present physiological theories of epilepsy, but give the following for a definition of the disease, believing it will cover all essential phenomena recognized in an epileptic attack, viz.: It is a chronic convulsive disease, characterized by almost invariable loss of consciousness, and special form of spasm, tonic or continuous, clonic or intermitting.

The chief ætiological factor is that of heredity, which we recognize as a biological law, through whose agency Nature seeks to eliminate defects and bring back species from accidental errors to the normal type.

Nowhere, perhaps, can one be so impressed with the extent of this great law, with its conflict of opposites, than in the study of neuro-pathology. The difficulties of the investigation of heredity are many, and in the study of all diseases it is true that results obtained fall short of actual facts. The transmission may be direct or indirect; indirect, as when one or more generations escape and the disease appears in the descendents. The tendency may be even more indirectly hereditary, as in cases where the patient's antecedents had a proclivity to

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* Read before the Illinois State Medical Society, May, 1891.

† Nervous Diseases.

‡ Lumleian Lectures, 1890,

§ Journal of Mental Science, Jan., 1891,

nervous diseases, declaring itself as hysteria, alcoholism, insanity, neuralgia, or other nervous affections, while the interchangeableness of neuroses is shown by the appearance of epilepsy in the patient. The direct transmission of epilepsy is frequent. It is incomparably the most frequent of neurotic diseases, producing epilepsy in the offspring.

Phthisis transmits a diathesis predisposing to epilepsy, insanity, imbecility, and general nervous disease. In the family history of epileptics, phthisis is found very frequently. Gowers found such history in 39 per cent. of his cases, but thinks this not very large, or conclusive as to the probability of phthisis producing the disease; he says this proportion is due merely to the great frequency of consumption in the community.

Echeverria and Savage believe there is more than a casual relation between the two diseases. Kerlin has very conclusively shown that phthisis has an influence most astonishing, in producing idiocy and imbecility with associated epilepsy; over 50 per cent. of cases studied by him show a family history of consumption, and of the 16 per cent. who were epileptic the existence of phthisis in the antecedents was shown in every case.

My experience among feeble minded and insane epileptics, convinces me there exists a strong relationship between the degenerate type produced by epilepsy and the enfeebled constitutions of the phthisical. Of the exciting causes of cases occurring early in life, to infantile convulsions can be attributed the most; the tendency to convulsions in the child is closely associated with the epileptic diathesis, and in many cases accidental convulsions are the commencement of a life-long epilepsy. (Wood.*)

Infantile convulsions, dependent upon difficult dentition, says Jacobi,† are not as frequent as are supposed. Other authorities, among them Sir Wm. Jenner, opine almost all convulsions associated with dentition are due to irritability of the nervous system which accompanies the constitutional condition of retarded development which we call "rachitis."

Rachitis is a much more prevalent affection than is usually considered, in the higher as well as in the lower walks of life, although more frequently seen in the latter.‡ It is preventable to a certain degree, hence this cause leading to convulsions can be removed. This fact suggests the thought that a considerable number of cases of epilepsy are really within the range of preventable diseases.

Epilepsy is sometimes the result of excessive mental excitement or mental strain. It follows in the train of acute fevers in children, also in infectious diseases, especially syphilis; may also originate from some reflex causes such as phymosis, muscular error in eye strain (especially if patient is a young adult and of tuberculous ancestry), intestinal irritation from various causes, disturbances of sexual organs, etc.; traumatism may occasion by producing molecular changes in the central nervous system. Occasionally we find cases where the fits are due to imitation; I had such a case some two years ago, in a boy aged 19, with neurotic history; his uncle, an epileptic, lived with the boy's parents, and the constant, almost daily, occurrence of fits in this man gave the boy much uneasiness, who feared he was destined to become an epileptic; and ultimately he did have several fits, always following those of his uncle, until he became quite depressed and melancholic, and, when he came under my care, epileptic symptoms were quite pronounced. This case, removed from the pernicious association, eventually made a good recovery. Such cases, perhaps, may be termed "contagious epilepsy," two such being cited by Dr. Emil Arnson, of Petersburg,§ both being girls, sisters, servants of a highly hysterical type. Previous to attack of first girl, the sisters had a violent quarrel which was followed by a typical epileptic seizure in one, the other sister being present. Several hours later Dr. Arnson found the second girl in a condition identical with that of the first.

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*Nervous Diseases and their Diagnosis.

† Keating, Cyclopœdia of the Diseases of Children,

‡ M. J. Lewis, M. D., Cyclopœdia of Diseases of Children, Keating.

§ American Journal of Nervous and Mental Diseases, May, 1891.

Brown-Sequard* gives importance to the recognition of the prodromata in epilepsy, the frequency of which is much greater than is generally known. The importance of knowing these warnings lies in our ability to often abort or mitigate the attack, for they are quite marked in many cases, consisting of disturbances of character, great irritability being especially noticeable. Mental disturbances, such as melancholia with fear of impending danger, a state of intense restlessness followed by a feeling of well being, elation, etc., I have noticed in several cases. A case at present under observation, becomes quite joyous, sings, etc., almost incessantly, until a spasm cuts short the hilarity and changes the condition into one of maniacal furor. Preceding attacks among the insane, we notice hallucinations of sight and hearing, and other sensorial disturbances. One of my patients hears a noise like a steam-boat whistle, also at the same time the sweet notes of a bird singing.

Marked aura is experienced by several of my cases. One has the sensation of an ascending flood of warm water; another, now dead, had spasm commencing in the fingers of the left hand which reached rapidly up the arm until it culminated in the throat, and a sensation of choking was experienced—he was often able to abort the attack by briskly rubbing the arm; another has intense pain located in the epigastrum succeeded by slight and frequent attacks of *petit mal*, when follows the general convulsion. Psychical auræ are frequent, and I have seen several cases. Recently a patient sent for me, saying he was going to die. I found him sitting up in bed afraid to lie down. He was highly excited, and begged for something that would sustain life, at least until daylight came. That night he had several very hard fits, but in the morning, when I saw him, he was feeling quite well. During the inter-paroxysmal period he was rational but preceding an epileptic attack invariably had the fear of impending danger.

Warnings are not given in all cases, however, some are stricken without the slightest knowledge of an approaching attack. Frequently, while engaged in amusement or work, I have seen the patient suddenly fall, seized by a spasm. I was once examining a boy for color blindness, and while selecting the various shades of a color, and reaching for a skein of yarn, he was stricken, falling to the floor; had a short but severe convulsion and then immediately arose, picked up the very skein for which he was reaching, and handed it to me, seemingly unconscious of having had the fit.

The paroxysmal period is characteristic in most all cases of true epilepsy, namely loss of consciousness with more or less muscular spasm. When the symptoms are few and simple, we distinguish it by the name of minor epilepsy or *petit mal;* the loss of consciousness in such a case is very brief and the muscular spasm is confined to the face, tongue, throat, eyes and neck. Pallor of the face is sometimes the only manifestation of the disease. If seized while standing, the patient does not fall; if in conversation, he may stop, appear confused, and then go on with his talk. Predominance of mental implication may prevail, and instead of any marked spasm the patient may perform some queer acts, as for instance, running or jumping; this perhaps is more marked in epileptic children than in the adult. Kerlin in his paper on "Epileptic Change and its Appearance among Feeble-minded Children," mentions several such cases. Wood maintains that convulsive symptoms and unconsciousness may both be absent. There is no uniform and regular appearance of the symptoms and results of epilepsy, therefore, Hughlings Jackson says there is, scientifically speaking, no entity to be called epilepsy. In the Lumleian lectures for 1890, he views as epileptic only those convulsions which arise in the highest, exclusively cerebral, level—that is in the pre-frontal lobe, where its highest motor centers are alone affected in true epilepsy.

To the other convulsions arising from the Rolandic zone and ganglia of the corpus striatum, he gives the name of epileptiform convulsions. I am inclined to believe, with Christian, that it matters not what muscles may be affected, or the extent and intensity of the convulsions; it will not be epilepsy unless at the same time there is loss of consciousness.

*Quain's Dictionary of Medicine.

In *grand mal*, the intensity of the convulsion varies according to the number of centers affected. There may or may not be an aura. Patient will fall if standing, and in many cases utters the peculiar epileptic cry. Face becomes intensely pale; pupils dilated; there is conjugate deviation of the eyes; tonic spasm, usually more marked on one side than on the other; respiration is impeded; cyanosis prevails; jaws firmly set—the tongue may be bitten; fingers firmly flexed, and extremities are distorted; veins of head and neck stand out like whip-cords; carotids throb violently. Tonic spasm then gives way, gradually, to clonic convulsions; froth, tinged with blood oozes through the clenched teeth; muscular vibrations grow less frequent, and end in irregular shock-like jerks; profuse sweating follows; contents of rectum and bladder are often voided, and ejaculations of semen are occasionally seen in the male. Clonic spasms last from one-half to two minutes, followed by stupor and stertorous breathing. A gradual return to consciousness is noticed, followed by sleep, which may be from a few minutes to several hours' duration. Patients generally feel dazed, have headaches, and are decidedly irritable after having had a spasm. The post-paroxysmal period may be marked by physical changes such as mania, melancholia, or epileptic automatism. Not every form of epilepsy is prone to issue in mental derangement, but it is true that those spasms which are most destructive to mental and sensorial activity, are those having the least manifestations of muscular spasm. Psychical disturbances, which are noticed in many cases, sometimes before and sometimes after an attack, vary from slight convulsion and obscuring of consciousness, to violent hallucinations of all senses—blind reckless fury predominating in those maniacal outbreaks; these attacks may last but a few moments, or several days. Epileptic disturbances are peculiar; one case, during the violent outbreak, invariably roughly treats his bible, biting, tearing and stamping it, saying it says things which are not true; but during the inter-paroxysmal period he is an incessant reader of the book. Many epileptics are kleptomaniacs—they steal and hoard up everything they can get hold of. Some three years ago I had an epileptic boy patient who would steal spoons from the table, break off the handles, and store away in a cigar box.

During the inter-paroxysmal period many cases are entirely normal, or the mental faculties are affected but slightly. Bevan Lewis says: "It is a well-recognized fact that certain forms of epilepsy, with frequent fits, may last for many years, and the mental faculties remain in the interval between successive seizures perfectly intact." All, doubtless, can recall such cases. It is probable that some feebleness of mind will be noticed; a large class of these unfortunate beings have gradual increasing mental aberation, eventually ending in dementia; none of the insane, unless it is the general paralytic, arrive at a more degraded level than the epileptic.

Procursive epilepsy has lately received attention; Bourneville, Ladame, and Mairet, have given considerable time thereto. The patient does not have an ordinary convulsion, but, instead, suddenly runs forward or in a circle. The attacks are brief and not followed by somnolence or coma; the patient does not fall, as a rule. Ladame says procursive epilepsy may be present for years before merging into ordinary epilepsy; transition from one to the other form may occur. It is not possible to localize the disdisease anatomically, but no doubt it is of organic cerebral origin. Mariet thinks the organic lesion one of sclerosis, either trophic or hypertrophic. The cerebellum is always affected. I have a male procursive epileptic under my care who, suddenly throwing down his book, rises, gives a shrill cry, throws his hands up, and runs forward, describing the arc of a circle, then a complete small circle, then again a large arc, when he falls, and is slightly somnolent, but soon gets up and resumes his reading.

We frequently observe in epileptics the condition called *status epilepticus*, characterized by a rapid succession of attacks, without return of consciousness during the slight remission; coma follows; there is absence of reflex, except during periods of temporary increase; continued elevation of temperature; rapid pulse and respiration; temperature ranges from 105° to 107° F., and may con-

tinue high even after death. This condition is evidently due to vaso-motor paralysis, the heat production still continuing while its elimination is inhibited. The researches of Wood, Ott, Randnitz, and others, have shown the possible existence of a heat center which may, in *status epilipticus*, become exhausted, and the balance of heat-forming and heat-elimination be disturbed. Rosenthal says it has not yet been proved that this condition could not be due to circulatory change. Death is due to exhaustion or meningitis.

During the past year I have seen four such cases prove fatal. In one the temperature reached 107.5° and remained high for several hours after death. Epileptics, as a rule, are religiously inclined, and many spend their time in reading the bible. In fact, we are all aware, that the religious history of the world has been influenced by this disease greatly. Mohamedanism owes its popularity and great influence to it.* It was epilepsy which held before Mohamed's eyes, and made to sound in his ears, the hallucinations which led him to believe he had a message from God. The dogged persistence, brute-like cruelty, and lack of human justice of Napoleon I., no doubt, had epilepsy for a basis. Reading the history of his memorable campaigns, we find the word impossible never entered therein; and Tallyrand and others, speak of his spasms, his madness, his distorted judgment. At the famous battle of Waterloo, during the critical period of its progress, not a word of command or advice could be obtained from him, for he sat mute, somnolent, utterly regardless of surroundings, and it was only by forcible removal from the field his life was saved. What would have been the political aspect of Europe to-day had it not been for Napoleon's epilepsy?

To find out in all cases, whether the patient has epilepsy or not, is by no means an easy task; in those mild forms attacked with complicated symptoms, it requires considerable time and observation. It is important, specially to alienists, that the form be recognized. From a medico-legal standpoint, it is well to watch closely for those cases of simulated attacks which are rare, but yet do occur. Hystero-epilepsy is differentiated from true epilepsy, first by a partial retention of consciousness, second by the violent hysterical manifestations, such as distortion, peculiar changes of position, etc.; I have a case of hystero-epilepsy under care, who only has fits in the presence of others, and then from three to six following in quick succession; he is nervous, excitable, and at times apathetic. True epilepsy is easily and readily recognized by the loss of consciousness, and more or less muscular spasm.

Epilepsy is a disease of the brain, but what part of the organ is affected, or the nature of the lesion, we do not know; there being no permanent lesion, there is no definite pathology. Starr regards the gross changes as described by Alexander, Meynert, and others, as not direct causes of the disease, and declares it is inconsistent with our clinical knowledge to seek for visible pathological changes. We find grave organic lesions such as tumors, abscess, meningitis, sclerosis, brain softening, etc., in the post-mortem examinations of epileptics, such lesions having been diagnosed before death, but their connection with epilepsy is doubtful; presumably all are capable of producing it. In idiopathic epilepsy there are no pathological changes. Jackson's explanation of such an attack, is a chemical one, as follows:

Phosphorus is a striking constituent of nervous matter; it is a triad in the abnormal nutritive process, producing unstable nervous matter; the phosphorus is replaced by nitrogen which is much more explosive, the replacement occurring in different degrees as evidenced by epilepsy major and minor; the change is a change of quality not quantity.

Brown-Sequard asserts that, in epilepsy as in natural sleep, beyond doubt cerebral anæmia is not the cause of the loss of consciousness; but it is extremely probable the cessation of the activity of the brain in sleep, either hypnotic or normal, (in *petit mal*, in a well developed epileptic convulsion, certain cases of syncope, in asphyxia and poisoning), depends upon an inhibitory action upon the base of the encephalon and cervical marrow, without the quantity of blood being diminished in the brain; he has shown this inhibitory ac-

* Blot on the Brain. Ireland.

tion by experiments upon dogs and other animals.*

Inherited epilepsy is rarely if ever cured, and, the longer the duration of the disease the greater improbability of its recovery. When the attacks can be directly traced to peripheral irritation and this can be removed, the case is more hopeful. Mental impairment indicates permanency of the disease. Epilepsy, of itself, is a rare cause of death.

All that can be done in the treatment of this disease is to render the attacks less frequent and less severe. The removal of peripheral irritation may make the case more hopeful, but statistics are not encouraging as to complete recovery, probably owing to the establishment of an epileptic habit due to the adjacent brain centres having become irritable and unstable.

Where focal epilepsy exists and operation is undertaken, the complete excision of the focal irritation is important, but even this may not cause cessation of the fits, for in these cases also the epileptiform habit may have become established. The correction of eye-strain, as a source of peripheral irritation, has received considerable attention from Ranney, Stevens, and others, with more or less success; and in gynæcological practice, removal of ovaries has been done for the same reason. I have a case in mind where ovariotomy was performed with cessation of fits following, as is the result after almost any surgical operation, but in due time the convulsions recurred with increasing frequency and severity. The treatment must be a general one, hygienic and dietary, with much attention to the digestion and bowels. Regarding hygienic care, it is advisable to give as much open-air exercise as possible, and with children allow them to play and enjoy themselves. While engaged in play or in attendance upon an amusement, epileptic children rarely, if ever, have an attack. The diet should be nutritious, but not too stimulating. Epileptics should, as far as possible, be free from care and responsibility. Medically, every form of drug in therapeutics has been used at one time or another. Now, however, we have learned that the most successful anti-epileptic drug is that which gives steadiness to the nervous system by lessening its activity and so diminishing the tendency to give forth discharges of high tension.

The bromides answer such a need better than other drugs, and Fothergill says they have changed the entire aspect of epilepsy. The bromide or potassium is most used, but other preparations are even more highly serviceable, especially bromide of sodium in cases subject to digestive disturbances, and bromide of camphor in associated vertigo. For general usage the bromide of sodium is the best preparation, as it may be given for years without deleterious effects; the only contra-indications being pulmonary tuberculosis, severe cutaneous lesions, or grave disturbances of nutrition. Involvement of intelligence, or emaciation, are not indications for withdrawal of bromides. Because of the transient influence, the selected bromide should be given often, that is, at least three times a day. In children it is well to begin with five grains of potassium bromide, and increase gradually until sufficient is being given to control the paroxysms. It is well to bear in mind if small doses have no effect, larger ones will be of little avail, and brominism likely to result. Seguin recommends that we should aim to keep the patient at the point of brominism, avoiding toxic effects, but I am not an advocate of such method, for when we give enough to control spasm this is all that is necessary; and why should we saturate the patient with the drug uselessly? I have had fair success with bi-borate of soda in the treatment of a number of cases where bromide of potassium has failed; one case, who formerly had from two to six severe convulsions daily, followed by homicidal tendencies, has thereby improved greatly; has not had a spasm for six months, and receives thirty grains three times a day. Another case, a boy aged 13, with nocturnal spasms, on ten grains thrice daily has gained greatly physically, without a spasm for over a month. In several cases I have had to discontinue the use of this drug owing to the gastric disturbances produced (nausea and vomiting), and in one case, decided vertigo. Emaciation, spoken

* Archives de Physiologie, January, 1891.

of by Risien and Russel, resulted in the first case mentioned, but when I combined syrup hypophosphites, he rapidly regained flesh, and is now as heavy as before. Stewart recommends bromide of potassium in combination with biborate of soda when diurnal and nocturnal spasms occur, the soda being peculiarly adapted to the latter. Where migraine is associated I combine cannabis Indica with the anti-epileptic remedy. Where heart lesion or feebleness of circulation exists, I give digitalis. If tonic treatment is indicated, as is true in almost every case, iron, cod-liver oil, hypophosphites, etc., should be given. To arrest paroxysm, inhalations of chloroform or amyl nitrite may be employed; and in the condition of *status epilepticus*, chloral hydrate per rectum, not less than forty grains at a dose. Analgesin, acetanilid, nitroglycerin, and numerous other remedies have been tried, alone or associated with bromides, but none have given satisfaction except in special cases, when some one seems, by some inexplicable manner, to have almost specific action; I recall one case treated for several months solely with the elixir pyrophosphate of iron. Where acne results it is well to combine arsenic with the bromides. In cases of syphilitic origin, anti-syphilitic treatment should be pushed; yet epilepsy due to hereditary syphilis is oftentimes worse when such treatment is pursued, and in one such case I was finally compelled to discontinue the use of iodide of potassium and other treatment, because the healing of ulcers always increased spasms—he had to have a vent, so to speak, for the elimination of syphilitic poison.

In traumatic epilepsy, trephining is justifiable and recommended in all cases; the operation as now performed is free from danger, and the patient should at least have the chance for recovery which it may give. It should be done early, and before organic changes and the epileptic habit are established. Carious teeth in epileptics should be removed, as the observations of Brubaker* show they are a source of irritation in many cases.

Jacksonville, Ill.

*Therapeutic Gazette, March, 1888.

REPORT ON THERAPEUTICS.†

BY W. H. WILSON, M. D.

It affords me much pleasure, as Chairman of the Section on Therapeutics, to report this branch of medical science has kept pace with the wonderful progress of our profession. The past year has not shown so marked progress in the introduction of new remedies as in the more thorough understanding of those in use, and in their proper administration. Clinical experience of the past year has shorn some of our once-lauded drugs of their glory, while the discovery of true merits in others entitle them to a prominent place in Materia Medica.

Antipyretics, a class but recently introduced, have stood the test of experience, and are now regarded as among our most valuable remedial agents. The most strict conservatism should be the true guide for their use. This would, in fever, limit their use to conditions of hyper-pyrexia: To be more clearly understood, I will define the terms pyrexia and hyper-pyrexia: Pyrexia is usually applied to simple fever where the temperature does not exceed 103°: Hyper-pyrexia when above that point. I, however, believe there are exceptions to this arbitrary rule for the use of antipyretics.

Owing to the peculiarities of some individuals, and a condition ususually defined as idiosyncratic, we have what I consider an indication for the use of these remedies. We frequently find a patient suffering with severe headache, thirst, great restlessness, and excitement of the nervous system, when the temperature does not reach a condition we term hyper-pyretic. While on the other hand we find, in cases where the temperature is hyper-pyretic, these symptoms absent or mild. Hence I consider antipyretics indicated whenever the symptoms are present with fever, without special regard to height of temperature.

The symptoms just enumerated indicate congestion of the nerve centres, and therefore should be relieved by the ingestion of antipyretics, due regard being paid to the strength of the patient, a condition of ex-

†Read at the Asheville meeting of the North Carolina Medical Society, May 26th, 1891.

haustion contra-indicating their use. To this class belong analgesin, acetanilid, and phenacetin. The effects of all are very similar, though in strength they are different, and should be used in doses accordingly. Analgesin may be given in ten to fifteen grain doses, while the doses of the others are usually from three to eight grains, as per effect, and condition for the relief of which they are administered. I have found nothing but favorable results from these drugs when judiciously administered for the proper diseased condition. When used for reduction of temperature, I invariable follow by supporting doses of quinine as soon as perspiration begins; when this rule is followed, one need never fear prostration from their use. In the incipiency of their use, too large doses were given. It is rarely ever necessary to give more than ten grains of analgesin, or six of the others, to sufficiently reduce temperature.

In addition to the use of these remedies in fever, I have found them most valuable for the relief of asthma, especially the spasmodic variety; also aching dengue, *la grippe*, spasmodic laryngitis, congestion of lungs. I consider these agents valuable in pneumonia, acting as well on the temperature and nervous system as on the circulation.

Their effects are salutary, in small doses, in the dyspnœa of advanced stages of consumption, care being exercised in regard to patient's strength.

I have also found them most valuable remedies for the relief of rheumatism, chronic or acute, muscular or articular; neuralgia, sciatica, migraine, headache in its various nervous forms, etc. They form many happy combinations with morphine and salicin for the above enumerated conditions, as per effect desired.

Adonis vernalis is a new cardiac tonic, similar in its effects to digitalis, and is useful in dropsy and various heart affections. Like digitalis, it renders the heart-beat slower, stronger, and increases excretion of the kidney.

Ajowan, a remedy containing thymol, is claimed by Dr. Waring to be a most efficacious carminative; he also claims for it remedial properties in cholera. It has likewise been found valuable in alcoholism, and should be given a further trial in that condition. As an ingredient of poultices it is said to have the property of relieving superficial pain.

Arsenite of copper is one of the most valuable recent additions to our list of therapeutic remedies. In the diarrhœa of typhoid fever, I have found it more valuable than opium and bismuth. In simple diarrhœa in combination with sulpho-carbolate of zinc, I consider it our most efficacious treatment, rendering the use of opium unnecessary, or in much less quantity than formerly. In dysentery its results are alike salutary.

Balsam apple has been used with success in the treatment of colic; also as an efficicient emetic. It was introduced by Dr. McNeil. Local pain relieving properties are attributed thereto, and it is likewise recommended as a hydrogogue in dropsy.

Mosquera Beef-Meal, and Beef-Cacao, are valuable food products recently introduced by Parke, Davis & Co. Every physician, no doubt, has had sad experience in endeavoring to nourish his patients by artificial food, but these preparations seems now to have relieved him of that annoyance. Many of the so-called foods are not only useless, but repulsive, to a delicate stomach. This preparation I have found to be pleasant, being agreeable to the most sensitive stomach, and highly nutritious—the property most to be desired.

This preparation is indicated in all cases of wasting diseases, and may be administered in soup, animal broths, milk, egg, tea, or on toast; the great variety of ways in which it may be administered being of much advantage, as patients do not thus tire of it. Its merits entitle to a trial in all cases where an artificial food is indicated.

Berberis aquifolium is a new remedy recently introduced by Parke, Davis & Co., which has valuable alterative and antisyphilitic properties. Also useful in obstinate skin diseases.

Fluid extract corn silk is valuable in cystitis, also as a demulcent, diuretic, and is efficient in those conditions of the urine where amoniacal decomposition is going on in the bladder, drachm doses every four hours

usually being sufficient to secure its physiological effects.

The preparations of jambul seed have recently been used for relief of diabetic condition. Its effect is said to be due to its inhibitory action on the diastatic ferments, lessening the formation of sugar; the bark is also said to be useful. The facts in regard to this preparation justify a further trial for the relief of diabetic conditions.

Convallaria majalis is a new cardiac tonic, made from the roots, flowers, or herb, the fluid extract of the root being the strongest. Its action tends to slowing and strengthening of the heart-beats. In overdoses, however, it is an active poison, but has not the disadvantage of a cumulative effect. It is also a diuretic, and claimed to give relief when other tonics fail. Dose, ten to fifteen minims every six hours, or *pro re nata*.

Liquor sedans is a scientific compound of black haw, golden seal, and Jamaica dogwood, with aromatics, valuable in uteroovarian irritation, ovaritis, neuralgia of uterus, metrorrhagia, etc. This is an excellent compound, the result of scientific blending of remedies so essential to therapeutic success.

Salicylate of soda has recently been found to be a valuable agent for the relief of colds, bronchitis, and in *la grippe* its action is seemingly specific in relieving the headache and muscular aching due to this universally prevalent disease. I have used it extensively in these conditions, with eminent success. To get fullest effects it must be administered in large doses, twenty or thirty grains every six hours, or *pro re nata*.

In regard to the beneficial uses of pepsin and pancreatin, I find, to obtain the best effect, the former should be administered early after meals, as its action is expected to benefit stomach digestion, or digestion in its initial process (mastication excepted), while pancreatin is active only in duodenal digestion. When pancreatin is administered immediately after taking nourishment, it is destroyed in the tedious process of stomachic digestion; but when administered near the end of the stomach digestion, it passes rapidly into the duodenum, where it performs its function as an active agent of digestion in its alkaline media. For these reasons, pancreatin should be administered from two to four hours after the ingestion of food, according to character of nourishment taken.

Beneficial results may be derived from compounding phenol with solution cocaine. The following results are obtained by adding the phenol: Toxic effects are prevented; decomposition of solution avoided; local congestion does not follow use of solution; anæsthetic effect is heightened.

Gastonia, N. C.

SURGICAL TREATMENT OF TYPHLITIS.*

BY DR. M. KOERTE.

Surgical intervention is indicated in cases of peri-typhlitis: When we have an acute, diffuse peritonitis consecutive to a perforation: In cases of acute peritoneal abscess: When there is a retro-peritoneal abscess: In case of relapsing suppurative peri-typhlitis.

1. Mikuliez was the first to show that the intervention of the surgeon may sometimes save patients affected with diffuse suppurative peritonitis consecutive to a perforation. I have three times operated on cases of this sort. One of the patients on whom I operated *in extremis*, succumbed. The autopsy showed a cure might have been obtained if there had not been a third abscess which could not be evacuated, seated between the stomach and diaphragm; this was the direct cause of death. Of the two other patients, one recovered with only a superficial wound remaining; the second, a young man of eighteen years, is in the process of recovery.

In operating, I advise not to make antiseptic lavage of the abdominal cavity; it is better to mop out the abscess with dry tampons. I do not take a great deal of pains to find the appendix vermiformis to excise it, for it will not do greatly to prolong the operation, the patient being always very much exhausted; but if the appendix can be readily found, it is well to cut it off, after having ligated it at the base with catgut.

2. Encapsulated abscesses should be incised as soon as possible, if we would not have life compromised by perforation; there is always danger of fatal pyæmia, as happened

* Read at the meeting of the Berlin Society of Medicine, June 3d, 1891.

to three of my patients who did not have surgical treatment. It is the rise of temperature on which we depend for knowledge as to whether the peri-typhlitic effusion be prevalent or not. We can have recourse to exploratory puncture with a hypodermatic needle to ascertain if we have to do with pus. I have operated on five abscesses of this kind. Four of the patients rapidly got well; the fifth has still a stercoral fistula; perhaps we have to do in this case with a tuberculous disease. I do not in operating adopt the method of two stages advised by Sonnenburg.

3. The perforation of paratyphlo-enteric abscesses is a relatively rare event, but these abscesses often occasion a phlegmon; the pus penetrates to the sub-diaphragmatic space, and may pass from thence, by perforation of the diaphragm, into the pleural cavity.

I have operated on five cases of this sort; all got well. Many authorities say we ought to make an early diagnosis of these abscesses; the exploratory puncture with the Pravaz syringe will much facilitate diagnosis.

4. The well known symptoms of perityphlitic relapse are often explained by the retention of pus, and this of itself gives a reason why surgical intervention is desirable. I have operated twice in cases of this kind. In one of the patients, the appendix was twisted around the colon and adhered firmly to it; it was full of pus. I carefully detached the appendix, tied, and cut it off, then sewed the stump into the wall of the colon. The sequelæ were very simple, and recovery rapidly ensued. In the second case, after making a herniotomy I found the appendix in the hernial sac, and excised it after ligation. Eight days afterward the patient was well. The appendix contained fœtid pus.

There is no doubt as to the necessity of operating in these cases. I do not advise following the practice of certain American physicians, who resort to the operation as a prophylactic during the first twenty-four hours after making the diagnosis of appendicitis; in fact, the great majority of cases of perityphlitis get well by internal treatment.

Berlin, Prussia.

Correspondence.

THE GERM THEORY.

In the "Good Book" we read "there is nothing new under the sun."

Not long since, I found, at a second-hand book store, a quarto volume on the Compound Microscope, written by one Adam, in the 17th century, in which I was suprised to find cuts and descriptions of several microscope accessaries which I had supposed were invented but a few years since,

The germ theory of disease is generally supposed to be new, and I do not now recall anyone who knows it was advocated prior to 25 years ago. About a year since, however, while visiting an old Curiosity Shop at the foot of Pike's Peak, Colorado, I found a book published in 1720, at "The Bishop's Head, St. Paul's Church Yard, London, Eng.," written by Benjamin Marten, M. D., and entitled "A New Theory of Consumption." In this volume I discovered many things which may be of interest to the readers of the MEDICAL AGE, therefore venture to give a few extracts from its pages. Dr. Marten writes:

But what this peculiar, primary, or effective cause of consumption really is, doubtless will be very difficult, if possible, to ascertain; however, modern discoveries and microscopical observation may assist us in our enquiries, give us some light into it, and warrant the following attempt:

The original and essential cause of them which some content themselves to call a viscous disposition of the juices, others a salt acrimony, others a strange ferment, others a malignant humour—all of which seem to me dark and unintelligible—may possibly be some certain species of animalculæ or wonderfully minute living creatures, that by their peculiar shape, or disagreeable parts, are inimicable to our nature, but however, capable of subsisting in our juices and vessels, and which being drove to the lungs by the circulation of the blood, or else generated there by their proper ova with which the juice may abound, or which possibly being carried about by the air may be immediately conveyed to the lungs by that we draw in, and there being deposited as in a proper nidus or neft, and being produced into life, coming to perfection, or increasing in bigness, may by their spontaneous motion and injurious parts, stimulating

and perhaps wounding or gnawing the tender vessels of the lungs, cause all the disorders that have been mentioned. * * *

This opinion of animalcules or exceeding minute animals that are inimical to our nature, being the cause of consumption of the lungs, will doubtless seem strange to abundance of persons, and especially to those who have no idea of any living creatures besides what are conspicuous to the bare eys.

After giving several pages descriptive of animalculæ and of the investigations of others, Dr. Marten continues:

And DeAudry, a famous physician of Paris, has wrote an admirable treatise of insects in human bodies, approved by the late King's physician and the whole faculty of Paris, wherein, speaking of animalculæ, or very minute living creatures, he says: "We must admit, then, that there are animals a thousand times less than a grain of dust, which we can scarcely see. These animals have a motion like other animals; they have muscles to move, tendons, and an infinite number of fibers in each muscle, and, in fine, blood and animal spirits very subtle and fine to fill or move those muscles, without which they could not transport their bodies into different places. The small seeds of insects do not only insinuate themselves by means of the air and aliments, but they likewise enter the flesh by the outside." * * * *

Thus we may possibly account for several diseases to which we are liable. This may be one way by which the smallpox is conveyed from parents to children, from generation to generation, which disease I am not only apt to think is primarily caused by inimicable animalculæ, but also verily believe it may certainly be prevented, especially in adults, by destroying the very essence of the distemper, whether it be some species of animalcula, or its ova, as I have conjectured. * * * I conjecture that it is very possible several distempers may be caused by animalculæ. * * * It may not be improbable that several species of animalculæ, flying or swimming in air, may, at their largest growth and utmost perfection, be so wonderfully minute as to be capable of entering into our bodies. * * * One species of animalcules, by their wonderful smallness and injurious parts, may instantly offend the brain and nerves, and cause apoplexies and sudden death; while other species may produce the plague, pestilence or malignant fevers, smallpox, etc.; and others, again, chronic diseases, such as hypochondria, melancholy, vapors, gout, scurvy, rheumatism, evil, leprosy, consumption, etc. * * * Blancard, in his Physical Dictionary, tells us: "The microscope tells us the parts of the blood are sound, but that in fevers it's full of worms." Etmuller says: "An universal plague is fortold by unwonted swarms of insects resorting to a country." * * *

Dr. Winder, in the Philosophical Transactions, writing of a Murrain in Switzerland, states: "On the borders of Italy a murrian infected the cattle, which spread further into Switzerland, the territories of Wurtemburg, and over other provinces, and made great destruction amongst the cattle. The contagion seemed to propagate itself in a blue mist that fell upon those pastures where the cattle grazed, insomuch that whole herds returned home sick, being very dull, forbearing their food, and most of them would die in twenty-four hours. Upon dissection, were discovered large and corrupted spleens, spachelous and corroded tongues; some had angina malignas. Those persons that carelessly managed their cattle without a due respect to their health, were themselves infected, and died like their beasts. I am assured by two travellers that this contagion reached the borders of Poland, having passed quite through Germany, spreading near two German miles every twenty-four hours, contiually making progressive voyages, suffering no neighboring parishes to escape."

Next Dr. Martin calls our attention to the fact that the bible gives description of animalculæ:

The plague of leprosy mentioned in Holy Writ affected not only the Jews, but their clothes, and the very walls of their houses, and was known by greenish or reddish streaks eaten into the walls, etc.—[Loidicus, 14th chapter.

I have given only extracts from this exceedingly interesting volume, but they are enough to prove, that in 1720 the germ theory was not new, for the author refers us to a volume, supposed to be nearly 5,000 years old, that describes the growth of bacteria without the aid of special ovens regulated to certain temperatures, and gelatin or other delicate cultivation.

E. H. GRIFFITH.

MEETING OF THE U. S. MEDICAL PRACTITIONER'S ALLIANCE.

The first annual meeting of the U. S. Medical Practitioner's Protective Alliance, was held at Baltimore, June 11th and 12th.

The order was incorporated under the laws of Maryland. Officers for the ensuing year were elected as follows: President, Dr. W. H. Crim, Baltimore, Md. Vice-President, Dr. W. V. Wilson, New Haven, Conn. Secretary, Dr. J. F. Dawson, Glendola, N. J. Treasurer, Dr. R. B. Elderdice, McKnightstown, Pa. As usual is meetings for organization, comparatively little work could be done outside the regular routine. An address, setting forth the objects and aims of the Society, and dealing with methods whereby physicians might the better enjoy the fruits of their labors, was read by the founder, Dr. J. H. DeWolf. Several other papers on alliance work in general were also read and discussed. Sixteen States were represented, and altogether the meeting was considered a highly successful one. The proceedings will be published it a few weeks.

J. F. DAWSON,
Corresponding Sec'y.

GLENDOLA, N. J.

PROPHYLAXIS FOR SUITS FOR MALPRACTICE.

EDITOR OF THE MEDICAL AGE:

DEAR DOCTOR,—I need not confess to you that every issue of THE MEDICAL AGE affords me new pleasure, and yet I wish to say that the first editorial in the last number, "An Interesting Case with a Moral for Doctors," which is of uncommon interest to the profession, convinces me that we can have no protection against such attacks until the claimant or plaintiff in such cases shall be, by law, compelled to give bonds sufficient to cover all damages that such suit and trial may bring to the defendant, in case the plaintiff is defeated. I would make it a misdemeanor for an attorney or jurist to entertain any complaint for malpractice until proper bonds had been given. This is the only "prophylaxis for suits in malpractice" that is, so far as I can see, of any real value.

Yours truly,

T. B. NICHOLS, M. D.

PLATTSBURGH, N.Y.,
July 3d, 1891.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

DUTIES OF PHYSICIANS AS EXAMINERS FOR LIFE INSURANCE.

The duties of the medical examiner in life insurance are delicate and important. A single mistake from careless or insufficient examination, may cost the company thousands of dollars—and it must be confessed that such mistakes are not uncommon.

Among the causes of death among those insured but a few months prior to decease, and accepted by supposedly skillful and careful physicians, we find consumption, organic diseases of the heart, cirrhosis of liver, uræmic poisoning, diabetes, cancer of various organs, cystitis, nephritis, Addison's disease, etc. Great injustice consequently results to the companies, and to applicants and policy holders, by hurried and insufficient examinations. That such examinations are a reproach to the medical profession is true, but the chief responsibility, nevertheless, lies with the companies themselves; too often they are willing neither to pay a fair price for thorough examination, or to afford suitable opportunity and facilities therefor.

The competition that exists among all forms and classes of life insurance, has led to very unfortunate and undesirable practices. Not only the co-operative, but both the stock and mutual associations, expect, and require, medical examiners to visit applicants at their houses, factories, stores or counting-rooms, and to uphold the claims and merits of the individual scheme; and the examiner is then and there expected to make his examination, often amid the confusion of business or conversation, in the presence of ladies, children, customers, and especially the agent of the company who in-

variably demands the acceptance of the risk. Again, among co-operative institutions, he may be called upon in the lodge room to examine a large number of charter members in a single evening, each in presence of others. How, under such circumstances, must he perform his work?

It is apparent that such investigation must necessarily be superficial and insufficient, and that in such practices are to be found the reasons why death losses are heavy in many associations, and out of due proportion to the assessments. This matter is of sufficient importance to call for most careful and thorough exercise of professional skill (and nothing less should be accepted); and payment should be made commensurate with the value of service required.

The physician should practice what he has been taught—to "see with his own eyes, feel with his own hands, and hear with his own ears." In justice to the applicant and company, as well as to himself and his professional reputation, he should conduct examinations only in the privacy of his own office. The applicant should disrobe; his exact height and weight taken, and their proportion to each other accurately noted. Thorough investigation should be made as to indications of dietetic, parasitic, diathetic and genetic diseases.

Very many diseases of the chest and abdomen, acute as well as chronic, may be detected by changes from normal in the color of the skin; it has been truly said that a man who has a perfectly skin, is almost certain to be healthy in other respects. The examiner should observe whether the skin be dry, moist, clammy, pale, blanched, livid, jaundiced, (or of that dull earthy hue which at once gives the impression of serious organic disease associated with disordered nutrition and emaciation), cyanosed, emphysematous or suffering sclerotic affection.

The general character of the constitution, whether vigorous or otherwise, should next be noted, particular attention being given to the form and development of the chest—whether enlarged and bulging, contracted and depressed,—in particular places. The form and position of the sternum, clavicle, and ribs should be noted, and evidences sought of pleuritic effusion, former absorption of pleuritic exudation, or of gaseous degeneration or tuberculosis of the lungs; also for indications or vestiges of rickets and diseases of the vertebral column. The movement of respiration, its extent and frequency, must be watched; and complete inspection and palpation of the abdomen of vast importance in many cases.

The temperature of the body should be duly recorded and, as in healthy persons this is subject to daily fluctuation, rising continually from morning to evening, and sinking again until morning, the hours of the day when the examination is made should be noted.

Exercise, according to its violence and duration, raises temperature; the taking of food and drinks has a similar effect, which should not be overlooked, but carefully estimated. In examining the lungs, heart, and liver, the examiner cannot exercise too much care. Many instances of incipient pulmonary tuberculosis may be detected by cautious scrutiny, in which one is much assisted by certain marked characteristics, such as large eyes, long eye-lids, thin slender hands, curved nails, leanness of the chest, etc., indications of a predisposition to the disease.

The sounds of the heart and general phenomena of the circulation should be carefully examined and recorded.

The liver and the condition of the *primæ viæ* and digestive system should be accurately examined; the urine, also, which is the product of eliminative action in the body, and it should always be voided in the pres- of the examiner—the applicant can usually succeed in inducing a flow by immersing his hands in cold water. Further, it should be analyzed before it has stood long enough to undergo chemical change. And here the question arises, how far should the examiner proceed with such analysis?

At present companies require only tests for albumen and sugar, provided the specific gravity and color are nearly normal and the reaction acid. If there is albumen or sugar present, the risk is generally disapproved; but it is very questionable whether such is just in every case. It is well understood that shortly after one has partaken freely of

highly albuminous food, albumen is to be found in his urine, although his health is perfect. The same is true as to the sugar after an excess of saccharine food.

Dr. Henry S. Millard believes all cases of chronic albuminuria, simply from the fact of albumen being found, should not be rejected by life insurance examiners, as he has known albuminuric patients who enjoyed practically good health and lived to good old age. Albuminuria is not always a more threatening symptom than other symptoms; and an albuminuric patient may occasionally be in every respect a good risk; these are cases where repeated and comprehensive examinations must be made before the examiner can decide as to the interests of his company, and there can be no unvarying rule as to this point. Manifestly, it is to the interests of companies to allow a special fee for such examination—a fee commensurate with the time and labor employed.

We have known persons with sugar in urine, to enjoy good health and outlive their expectancy, according to expectancy tables, and still would not be accepted as fair risks under existing rules. We believe, therefore, that the examiner should proceed further than the rules direct, and make analysis for bile pigments, blood corpuscles, and epithelial casts. It is highly important that in the examination of every applicant, some blood should be drawn and submitted to careful scrutiny and microscopical inspection; the color and number of both the red and white corpuscles, and the proportion as well as the character of the constituents of the fluid, should be noted.

Almost all diseases of the rectum and anus are called "piles" by the majority of people; but how many of the physicians of life insurance companies ever examine an applicant to ascertain whether he is afflicted with piles, fistulæ, pruritus, polypi, fissures, warts, ulcers, prolapsus, proktitis, or cancer of rectum? Manifestly, to fail to do so is a great injustice.

Thorough examination and record should be made as regards family history, resemblances, predispositions, habits of life, and nationality, of those connected by ties of consanguinity or by marital relations to the applicant,—and his own habits in regard to the use of stimulants, narcotics, and patent medicines, likewise noted; his general appearance, scars of wounds or vaccinations, history of diseases suffered from, defects and special marks, peculiarities as to large or small bones, temperature, color of hair and eyes;—in fact, everything pertaining to health, past, present, and future, should go into the record.

Further, it is important the record be made by the examiner, in his own hand-writing, and not, as is often customary, by the solicitor or agent.

The theory that life insurance and mutual benefit associations are simply charitable institutions exempt from the restraints of business rules, must be abandoned. If not, all medical examinations should either be dispensed with or reversed, so that their aim should be to discover the most diseased and precarious cases, as such are certainly the most needy objects for charity. If we are to have any scientific scrutiny of applications, it should be something that will give a firm basis for intelligent judgment. Anything short of that is a reproach to both the medical fraternity and to the insurance companies.

IS IT EXPEDIENT TO ADD A NATIONAL HEALTH OFFICER TO THE PRESIDENT'S CABINET.

At the last annual meeting of the American Medical Association, a resolution was presented looking to the establishment of a National Health Bureau, the head of which is to be a member of the President's Cabinet. The resolution was adopted without any dissenting votes, and a committee appointed to bring the matter before Congress, with the purpose of having such an office created.

This question has already been freely discussed by representatives of the medical press, and the general consensus of opinion seems to be that, from some points of view, such a National officer might be appointed with advantage to the public health.

There is, however, not a little fear that if such officer were appointed, his efficiency would be sacrificed to the vicissitudes of political changes. The position should not be used as other Cabinet positions are for the

advancement of party ends, but be free of the embarrassments of politics.

As indicative of the lay press opinion on this subject, we quote the following from the New York World:

And now a convention of doctors demand that their profession shall be "represented" by the placing of a doctor in the Cabinet as head of a Department of Health.

The demand is possibly on all fours of logic with that which resulted in creating a Secretary of Agriculture, but it is none the less founded in a total misapprehension of the nature and purpose of the Cabinet.

That body was not created to "represent" professions, callings or industries, but to attend to the executive business of the country. If the representative idea be accepted we shall presently have Secretaries of Architecture, Theology, Journalism, Carpentry, Printing, Sawmills, Baseball, the Drama, and Sitting on the Fence—for all these are occupations in which great bodies of citizens are professionally engaged.

As representative of the attitude of the Eastern and Western Medical Press, we quote the sentiments of the New York Medical Record, and the Cincinnati Lancet and Clinic, who we think may be classed according to the World's differentiation as "Sitting on the Fence."

The Record says:

As has been seen by a reference to our reports of the recent meeting of the American Medical Association, a committee was appointed to memorialize Congress in regard to the creation of a new Department of Health, and the appointment for the oversight thereof of an officer who should rank with the present Cabinet. Much can be said in favor of such a proposal, and several important facts must be said against it. Probably no country in the world has a greater need for a Minister of Health than the United States. Apart from the matter of immigration, our proximity to the yellow-fever countries, our commerce with those lands where cholera is endemic, and our enormous tides of travel, all conduce to the introduction and spread of contagious disease. We have a National Board of Health, it is true, and we have a competent army, navy, and marine hospital medical service. But the control of the country's health in its broadest sense, is at present exerted along too many channels to be of the highest possible efficiency. The advantage of having one central officer to whom all questions could be referred, is apparent. When sudden epidemics arise, or other emergency where prompt action is necessary, quicker means can be taken to bring preventive measures into play from this centralization of authority.

This commendation, however, is antagonized by the Record's further statement that the proposed Bureau with a representative in the Cabinet, would only be an additional political plum to be distributed according to party expediency.

The Lancet and Clinic says:

It seems to us that such an officer as the one above mentioned might prove of the very highest good to our country, provided political influences were entirely removed from the position.

One very important subject to which such an officer should address his energies, is the pollution of our waterways by means of all sorts of refuse.

The transportation of dead bodies (especially those the victims of contagious diseases) from one State or locality into another, is something requiring a National rule.

Our common carriers, the railroad cars and steamboats, require oversight as to their hygienic and sanitary appointments. A distinguished physician has forcibly pointed out the dangers that lurk in our sleeping-cars, and has very properly suggested the possibility—nay, even the probability—of the hangings, upholsterings, and carpets of these compartments, being a lurking-place for the germs of infectious diseases. Especial attention is asked to the dangers of tubercular infection from such sources.

The history and spread of epidemics might easily be traced by means of the post-offices throughout the land, and efficient methods of controlling the spread of these diseases instituted.

Methods for the proper transportation of cattle to be used for food might well be under the control of this Department, for now cattle which are found to be unfit for food in one city, are shipped to another where the inspection is less rigid.

We feel like urging the medical profession to meet this issue fairly, and do all they can to further the idea by lending their influence and active support. Let the graduates of all legal colleges unite in an endeavor to bring about a very desirable result.

If the measure, however, cannot justify itself on the ground of necessity, and show some good reason for the existence of such an officer, it had better "die a bornin."

While it is highly improbable that the Bureau proposed will become a reality in the near future, the agitation of the subject will pave the way to a full discussion *pro* and *con*, and lead to an intelligent view of its propriety and feasibility.

HOLIDAY TIME.

Now is the time when the weary worker, if he would follow the custom of his fellows, rests and recreates.

The distressing activity of the working

season should give place to the summer of contentment that comes from relaxation from mental effort in haunts by the sea or mountain.

The doctor who would come back to his patients with renewed vigor and cheerfulness, should some time seek the retirement and seclusion, the change of scene and air, which render him capable of inspiring hope in others by his presence, and fit for the arduous work that is his lot.

July and August are the crown of summer, the natural period for rest, recreation and change.

It is then that sea bathing can be best enjoyed, that yachting presents its maximum of pleasure, and that mountaineering can be enjoyed. The long day permits the prosecution of out-door occupation to a late hour, and saves the holiday-maker from the *ennui* which is apt to overtake him in the autumnal evening spent in hotel, or lodging-house.

The London Lancet, in a classical outburst, moralizes on the summer holiday. It regards the development of this practice as a comparatively modern habit, but concedes that it had its type in ancient times.

The Roman noble delighted to remove from the heat and bustle of Rome to Baiæ or Salernum. Horace used to spend the dog-days in the comparative cool of his upland Sabine farm. Tiberius made of Caprea a resort unhappily too notorious. But travel for the multitude is a modern idea, and would have seemed impossible and absurd in ancient times. The facilities for locomotion were inadequate and costly; the knowledge of other countries was scanty; the travel habit was still undeveloped.

The idea of the necessity of travel as a means for the preservation or restoration of health, though the Galenic precept, "*in morbis longis solum vertere conducit*" shows its recognition was not a fundamental principle of medical science, still less a recognized axiom of popular opinion. That the modern habit is on the whole a wise and salutary one, we need hardly stop to insist, as its utility is generally recognized and seldom questioned. Relief from monotonous drudgery, rest, escape from the smoke-laden air of great cities to the pure breezes of sea or mountain, change of habit, diet, amusement—all these things are involved in a suitable holiday, and it hardly needs demonstration that on the whole they make for health. Nevertheless, it is possible to make too much of a fetich of even a good practice, to ignore its dangers, and to be indifferent to the rules by which it must be regulated if benefit is to result. Travel and change of air are not to be recommended haphazard even for the healthy, still less for the ailing.

Experience shows that, while benefit is often obtained, it is not rare to meet with persons who return from a holiday wearied rather than refreshed in body, and mentally exhausted rather than recreated. The most common errors are either to plan a holiday without regard to the individual's peculiar needs and capabilities, or to carry it out with infringements of the general laws of health and common sense. If an individual who pursues a strictly sedentary life for eleven months in the year spends his holiday month in climbing mountains, in severe rowing or prolonged pedestrian excursions, he need hardly be surprised if he overstrains his soft muscles and flabby heart, and returns worse rather than better for his trip. He must learn that violent physical exercise requires training, and is not to be attempted with impunity by persons unaccustomed to it.

Errors in diet are another fruitful source of a spoiled holiday. The absolutely eupeptic individual, the man who can eat anything with impunity, is rare; and most of us have at some period in our lives to put ourselves under dietetic rule. It often happens, however, that the man who is a prudent eater at home, throws all rules to the winds when upon his holiday.

To sum up the general principles of travel is not easy, as every case requires its own rules, but certain leading ideas are sufficiently clear. The over-worked and physically exhausted man must remember that rest should be his watchword; the man of sedentary habits must realize that he cannot safely adopt the practices of the trained athlete simply by exchanging the city for the country; the dyspeptic must bear in mind that while travelling he still carries with him his functional weakness; the man on the wrong side of fifty must lay aside the enterprises of youth.

RESUSCITATION FROM DROWNING.

The prevalence of surf and deep-water bathing, and the not infrequent fatality attending bathers whose lives are imperilled from loss of voluntary movement, as in cramp, over fatigue, or recklessness in exposing themselves to existing dangers of surf, undertow, or deep-water bathing, render a knowledge of methods of resuscitation from drowning of general interest, especially to physicians who may be called upon to direct the treatment of such cases.

Physicians are familiar with the various methods commended for restoring respiration in such cases, but not all have presence of mind enough in such emergencies to carry out a few common sense measures which may be instantly employed.

In the Schweiz. Blatter f. Gesundheit, Herr Setens, President of the Seaman's Society in Hamburg, suggests the following resources:

When a person is discovered to be drowning, call to him in a loud voice that he shall be saved, to prevent demoralization from fright.

The rescuer should undress as rapidly and completely as possible, even tearing the clothes from him, that he may not be encumbered.

The rescuer should not touch the drowning person while violently struggling in the water, but take the first opportunity to seize him, by the hair if possible, throw him quickly on his back, the rescuer himself swimming on his back and towing the body after him, resting the head on the chest, holding the head with one arm, that the other arm and limbs may be free. This position may be maintained longer, and a body be supported more easily till further aid from shore is received, than by breasting the water in the usual position.

When the current sets from the land, as in sea bathing, it is better to adopt the last position described, and await aid, than to struggle against the current for shore, as this latter procedure often loses both the rescuer and the one he seeks to save, through ineffectual efforts resulting in exhaustion.

If a boat is available, the stern or bow are the proper places to get bodies in a boat with the least danger of capsizing. The body once in the boat, or ashore, should be placed with the head lower than the body, which may be done by placing the back on the seat of a boat or on a hillock of sand, with head extended and drooping backward, the arms being extended behind the head. This usually results in emptying, by the mouth and nostrils, much of the water that is interfering with respiration, and may be supplemented by the movements of the Sylvester method of inducing forced respiration.

If stimulants are available, their hypodermic use should be actively and heroically resorted to.

THE PROPOSED PAN-AMERICAN CONGRESS.

It is proposed to hold a Pan-American Medical Congress. It is contemplated to hold this meeting during the World's Fair, and from its success we may look for much important work, such, indeed, as a representative body of this nature may pertinently and wisely consider.

There will be untold advantages for personal improvement and a knowledge of the great advances made in all branches of the science of medicine. This will come from the exhibitions, from study, from contact with others, the teaching of the period, aside from the results already attained, and upon which future progress is to rest. Methods of medical teaching will be particularly interesting to foreigners, and many of our own older practitioners who have been secluded for years by the constraints of a rural environment.

The contact with fellow laborers from every clime, and the mutual good which follows the free interchange of views and experiences. This communion of thought is a bulwark of our science, and its strengthening, upon this occasion of the World's Fair, will not be without happy results.

Every effort should certainly be made by physicians to make this Congress a success from every point of view, social and scientific.

Book Notices.

THE GENUINE WORKS OF HIPPOCRATES, translated from the Greek, with Preliminary Discourse and Annotations, by Francis Adams, LL.D., Surgeon. Octavo, 766 pages, extra muslin, gilt top; price, $5.00. New York: William Wood & Company.

To the scholarly members of the medical profession the perusal of this work will afford agreeable occupation for many a leisure hour.

All who read the interesting record of the theories and opinions of this "Father of Medicine," must be impressed with a realization of its comprehensiveness, its lucidity, and its basic foundation in profound study and observation of the eternal laws of Nature, and appreciate that, while later centuries have brought us increased knowledge of drugs, their action, and the philosophy of the cure of disease, the true mission of the physician, was not unknown to the ancients.

The author has had the benefit, in preparing this edition of the works of Hippocrates, of the result of the labors of others who have attempted this task,—such standard editions as those of M. Littré, Foës, Van der Linden, and Kühn—and has supplemented them by reference to many other separate authentic treatises on the theories of Hippocrates.

This edition is not only more complete than others, but is made intelligible to the modern reader by the author's annotations and explanations.

As an introduction to it, under the title of "Preliminary Discourse," the author has given a most interesting chapter on The Origin of Grecian Medicine, with a sketch of the life of Hippocrates.

The other sections are devoted to the consideration of the following subjects: Disquisition on the Authenticity of the Different Treatises Attributed to Hippocrates; On the Physical Philosophy of the Ancients, or, More Especially, the Doctrines with Regard to the Elements; The Pythagoreans; The Platonists; The Stoics; The Epicureans.

The works of Hippocrates then appear condensed under the headings of Ancient Medicine; Airs, Waters, and Places; Prognostics; Regimen in Acute Diseases; Epidemics; Injuries.

Among the aphorisms of Hippocrates will be found many which modern physicians, desirous of increasing their breadth of view, might well ponder

The book is excellently printed, and bound in classical and refined form. The publishers are to be congratulated on placing it before the American profession.

SCRIBNER'S MAGAZINE FOR JUNE.

"To Faunus." Frontispiece. Being the last of a series of illustrations by J. R. Weguelin for selected Odes of Horace; the engraving by Henry Wolf.

"Speed in Ocean Steamers." By A. E. Seaton. [The fourth article of the series on Ocean Steamships.] Illustrations by Carlton T. Chapman and V. Pérard; engraving by Heard, Witte, Merrill, E. H. and G. De l'Orme.

"Horace," Book III, Ode XVIII—"To Faunus." [Henry Herbert's Translation, reprinted with Mr. Weguelin's drawing (frontispiece).]

"A Matter of Fact." By George A. Hibbard.

"Starting a Parliament in Japan." By John H. Wigmore. The illustrations by Robert Blum, and from photographs; engraving by W. Miller and Andrew.

"Two on the Terrace." By John Hay.

"Izard Hunting in the Spanish Pyrenees." By Paul van Dyke. Illustrations by Kenyon Cox; engraving by Atwood and Andrew.

"Corban"—A Song. By Mrs. James T. Fields.

"The Chimes of Walletikon"—A Swiss Story. By George L. Catlin.

"Outlawry on the Mexican Border." By E. Pilcher.

"An Old Danish Town." By Jacob A. Riis. Illustrations by J. D. Woodward, Charles Broughton, V. Pérard, and F. Day; engraving by E. Clément and Van Ness.

"The Haunts of the Black Sea-Bass." By Charles Frederick Holder. Illustrations by M. J. Burns; engraving by Bodenstab and Van Ness.

"My Uncle Dick." By John Elliott Curran.

"Training a Tropic Torrent"—An En-

gineer's Glimpse of Hayti. By Foster Crowell.

"Mrs. Manstey's View." By Edith Wharton.

"Landor Once More." By W. B. Shubrick Clymer.

"The Point of View;" Irresponsible Trading—American Pictures in Paris—A Threat of New Coins."

A Text Book of Practical Therapeutics with Especial Reference to the Application of Remedial Measures to Disease, and Their Employment Upon a Rational Basis. By Hobart Armory Hare, M.D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to St. Agnes Hospital, and to the Medical Dispensary of the Children's Hospital, etc. Second Edition. Enlarged and Thoroughly Revised. Lea Bros. & Co., Publishers. 1891.

This work has received the rare distinction among medical works of reaching a second edition six months after its first appearance. We note among the important new features characterizing the second edition, additional information regarding the remedies recently added to the Materia Medica; the method of employing the rest cure; the use of suspension in the treatment of locomotor ataxia and allied affections. Many new prescriptions have also been inserted to illustrate the best modes of applying remedies.

Among other features of this practically helpful treatise which will make reference to it convenient and profitable, are the arrangement of titles of drugs and diseases in alphabetical order, according to their English names; the introduction of the preparations of the British Pharmacopœia; a dose list of drugs officinal and unofficinal.

Dr. G. E. Schweinitz, contributes articles on Diseases of the Eye; Dr. Edward Martin, on Venereal Diseases and Antisepsis; Dr. Barton C. Hirst, on Diseases of the Puerperal State; Dr. J. Howard Reeves, on Diseases of the Upper Air Passages.

In addition to the general index, a copious and explanatory index of diseases and remedies has been appended which will render the contents easily accessible.

Belford's Magazine for June.

A prominent and popular feature of this excellent magazine is a complete novel in each issue, in addition to its usual complement of entertaining fiction, poetry, science, art, politics, humor, the drama, morals, social notes, and book reviews, by a galaxy of stars. The contents for June are as follows: A Bargain in Souls, by Ernest De Lancey Pierson; The Wage System, by Eva McDonald; The Larkspur, by Jennie C. Morton; Deep in the Heart, by R. B. Davenport; Physical Culture: Walking for Health, by "A Texagenerian;" Genius and Morality—The Disease of Genius, by Victor Yarros; Are Men of Genius Wicked? by Frederick T. Jones; Though a Glass Darkly, a monologue, by Margaret S. Briscoe; Presentiment, by Edgar Saltus; Foreign Trade and Reciprocity, by Franklin MacVeagh; Popular Science, by Felix Oswald, Ph. D.; The Dead, by W. B. Seabrook. The Speakership of the next House, the Tariff and Farmers' Alliance, are editorially discussed. The subscription price of this very complete magazine is $2.50 per year. It may be obtained direct of the Western agents, Belford, Clarke & Co., Chicago, Ill., or through any book dealer.

Surgical Bacteriology. By N. Senn, M.D., Ph. D., Professor of Surgery in Rush Medical College, Chicago, and in the Chicago Polyclinic, Attending Surgeon to the Milwaukee Hospital, Consulting Surgeon to the Milwaukee County Hospital and to the Milwaukee County Insane Asylum, etc., etc. Second edition, thoroughly revised. Lea Bros. & Co., publishers. Price, $1.75.

Eight new illustrations have been added to the second edition, and the subject of the relations of pathogenic micro-organisms to the various surgical lesions, treated at greater length. For more ready reference, the book in its revised form has been divided into chapters, and contains an index to subjects and authors. The interest excited by advances in surgical bacteriology has attracted wide attention to this interesting line of research, and a record of what has been achieved, so fully presented by Dr. Senn, must stimulate further investigation and lead to still further discoveries and improvements

in the application of facts evolved, to the more satisfactory treatment of affections requiring surgical treatment.

Collected Contributions on Digestion and Diet. By Sir William Roberts, M.D., F.R.S. Lea Bros. & Co., publishers, 1891. Price, $1.50.

Sir William Roberts' contributions to the literature of dietetics are classical, and the reproduction of his Lumleian lectures on "Digestive Ferments and Artificial Digested Foods," and on "Dietetics and Dyspepsia," "On the Therapeutics of Stomach Digestion," "On the Estimation of the Amylolytic and Proteolytic Activity of Pancreatic Extracts," on "Feeding the Sick," "On the Use of Gastric Antacids," and "On Some Practical Points in Dietetics"—all of which have been combined in this book under one cover—afford most instructive reading to those interested in the treatment of diseases affecting the alimentary tract and nutrition.

The book is a most useful compilation of the experience of this well known authority on dietetics, and supplemented by the knowledge which new investigations are constantly adding to the fund of information regarding the action and selection of foods and digestive ferments, will be likely to secure wide reading.

Insomnia and its Therapeutics. By A. W. Macfarlane, M.D., Fellow of the Royal College of Physicians, Edinburgh; Fellow of the Royal Medical and Chirurgical Society of London; Examiner in Medical Jurisprudence in the University of Glasgow; Honorary Consulting Physician (late Physician) Kilmarnock Infirmary; Formerly Examiner in Medicine and Clinical Medicine in the University of Glasgow, etc., etc. (Reprinted from Wood's Medical and Surgical Monographs.) Octavo, 302 pages, muslin, $1.75. New York: William Wood & Co.

This is a modern and practically helpful consideration of the causes of insomnia and the modern methods of treatment. The practice of all physicians will confirm the opinion that insomnia is a most prevalent condition in the overworked American of the present era. How to relieve it without establishing a habit for the use of soporifics and narcotics, is a problem the physician must often solve. Its solution is ably given in Dr. Macfarlane's book. The remedial measures and the application of medicinal and extra-medicinal means are very thoroughly presented.

Fundamental Problems. The Method of Philosophy as a Systematic Arrangement of Knowledge. By Dr. Paul Carus. Second Edition, Revised and Enlarged. 372 pp. Price, $1.50. Published by the Open Court Publishing Co,, 169–175 La Salle St., Chicago.

The contributions of Dr. Carus to the literature of psychology, are already well known to readers interested in this and allied studies. Many of the essays in this collection have been published editorially in "The Open Court," and have been re-edited by the author for issue in this more complete and convenient form. Among the topics discussed are: Sensation and Memory; The Problem of Causality; The Idea of Absolute Existence; The Stronghold of Mysticism; Hedonism and Asceticism. These are supplemented by an appendix representing replies to criticisms in which many ethical and psychical problems are ably considered.

Wood's Medical and Surgical Monographs, June 1891, Vol. 10, No. 3.

This number comprises the following essays: "Influenza Associated with Nervous and Mental Diseases," by Dr. Van Deventes; "Technique of Ling's System of Manual Treatment as Applicable to Surgery and Medicine," by Arvid Kellgren, M.D.; "Antipyresis," by Prof. D. Arnaldo Cantani; "Some Urinary Disorders Connected with the Bladder, Prostate and Urethra," by Reginald Harrison, F.R.C.S.

Ling's system is amply illustrated to convey a definite idea of the details of its application. This takes up the major part of this number. The other essays are brief presentations of modern views relating to the subjects discussed.

Lectures on Tumors from a Clinical Standpoint. (Just issued.) By J. B. Hamilton, M.D. Geo. S. Davis, publisher, Detroit.

Notes and News.

Electro-plating the Dead.—

The Scientific American for April gives a graphic illustration of Variot's method of electro-plating the dead. Dr. Variot is one of the most distinguished physicians of the Paris hospitals. He proposes the use of electro-metallurgic processes for obtaining indestructible mummies. The doctor metallizes the entire cadaver. He surrounds it with an envelope of bronze, copper, nickel, gold, or silver, according to the caprices or wealth of the surviving friends.

Under the influence of the electric current, the deposition of the metal goes on uninterruptedly. The molecules of metal deposit upon the skin of the cadaver, and soon form a continuous layer. A deposit of from ½ to ¾ of a millimetre in thickness offers sufficient strength to resist external bendings and blows. A thickness of ½ to ⅓ of a millimetre ought not to be exceeded for the metallic covering of the face and hands, which will thus be perfectly moulded. Upon the trunk, the abdomen, the first segments of the limbs, and the neck, the integral preservation of the plastic forms is much less important. So if it is judged proper to consolidate the metallic mummy, a deposit of from 1 to 1½ millimetres will be given.

What is the future in store for this process of mummification, which Dr. Variot calls "Galvanic Anthroplastic"? it would be impossible to say.

The inventor of the process, however, accords to the total metallization of the body but slight importance. The object of his researches has been more especially to give the museums and laboratories of our faculties of medicine very faithful, very exact, specimens, rather than to rescue cadavers from the worms of the grave.

The Transferred Malady (A Case of Metastasis).

(IN AN OCULIST'S OFFICE.)

How sweet the girl! I saw her pass
  The waiting group, with dumb surprise;
A golden-haired, trim, willowy lass,
  With heaven's soft azure in her eyes.
What could there be in them to mend?
  Nothing, I stoutly should insist;
But still she asked to see my friend
  The bachelor—and oculist,

I saw her take the patient's chair
  (Venus and Science matched amain),
And, though his search found little there,
  He asked the girl to come again.
But while with his ophthalmoscope
  He sought the source of her distress,
In the next room, with rhyme and trope,
  I tried my rapture to express.

"Neuritis of mild type it is,"
  He said (whatever that may be);
"Here is a wash I use for this,
  But come each day and visit me."
I knew the doctor's ready skill;
  Yet while he battled with the case,
His eyes received from hers a thrill:
  A crimson flush suffused her face.

Daily, as she was bid, she came;
  Daily the doctor scanned her eyes.
A cardiac spasm, I need not name,
  At length he struggled to disguise;
For gazing in those orbs of blue
  So close, transferred an aching smart.—
No "wash" he ever gave or knew
  For ailing eyes could help his heart.

The girl was cured, the patient lost.
  What now avails his utmost fees,
Or rapid skill, to be so tossed
  About by Cupid's sharp caprice?
Those blue eyes, had *I* the case,
  Should not have been for years dismissed.
To keep them always face to face
  I'd die—a baffled oculist,

—Joel Benton in *Harper's Monthly*.

A Supreme Court Decision of Interest to Physicians.—

It is not often that the Supreme Court of the United States is called to pass upon a question of special interest to medical men as distinguished from other patriotic citizens, but such a one was decided not long ago. The ruling was on the right of a railway company, when sued by a person who has sustained injuries, to have such person examined by its own surgeon.

A woman sued the Union Pacific Railroad Company, in the Circuit Court of Indiana, on account of an injury of the spine, which she claimed had resulted from the fall upon her of an upper berth in a sleeping car. Three days before the trial, the Company asked the court for an order requiring the woman to submit to an examination by the Company's physician, the examination to be made with as little exposure of the person as possible, and in the presence of the physician of the

injured woman. The Court overruled this motion on the sole ground that it had not the legal right to enforce such an order. The case came before the Supreme Court on the correctness of this ruling, and the latter sustained the lower Court, saying that such an examination is an invasion of the sanctity of the person to a degree that the law does not recognize, and that it is inconsistent with the common law. The opinion said, the Court could not find that, until within a generation, it ever was thought a court of common law had such a power as was claimed in this case. Justices Brewer and Brown dissented from this ruling.

An Old-School Doctor.—

Oh, a wee man is my doctor,
And he knows no wise old saws;
He has balm for all my troubles,
But he never hems and haws.

All unwrinkled is his forehead,
And he wears his long hair curled.
His eyes are blue and shining,
And he smiles on all the world.

His gown is quaint in fashion.
Short, to reach a dimpled knee.
His are tiny feet that patter,
Patter almost ceaselessly.

When the shadowy dusk is falling,
And my home again I see,
Through the lowest pane he's peering,
And his healing waits for me.

All my wounds he binds up deftly,
And he pours in oil and wine;
Binds them with his arms so tender,
As about my neck they twine.

He gives hope of bright to-morrows,
As his cheek on mine he lays,
Weariness is all forgotten,
Cheery grow the darkest days.

Ah, the magic of his healing
Can't be learned by book or rule!
Heaven has taught this blythe young doctor
Of a very old, old school.

—William Zachary Gladwin, in *Good House-Keeping*.

Medical Journal Making.—

Until within a comparatively recent period, this business was monopolized by a few college professors and medical book sellers, who were content to jog along in beaten paths at a pace that made progressive physicians exceedingly nervous. They filled their journals with prosy matter that served as post-prandial soporific to the average reade who attempted to wade through their mon otonous pages. No amount of proddin seemed to stimulate them. Enterprisin manufacturing pharmacists and surgical sup ply dealers, growing impatient at such long continued lethargy, entered the field and pu their brains and energies into the work. Th old stagers held up their hands in holy horro but their enterprising neighbors had come t stay, and they are with us yet, and what ha been the result? A comparison of the medi cal journals of to-day with those printe twenty years ago shows that wonderful pro gress has been made in their mechanical a well as literary make-up. Much newspape spirit has been injected into their columns and readers peruse them with pleasure an profit.—*Dixie Doctor*.

Causes of Insomnia.—

These are arranged as follows by Folson (Boston Med. and Surg. Journal):

Perverse habit of sleeplessness.

External causes acting through the senses

Excessive cerebration.

Reflex, especially indigestion; then genito urinary.

Traumatisms; physical, psychic, or both

Auto-toxæmia; from syphilis, constipation gout, etc., and habitual excess in coffee o drugs.

Exhaustion from disease, innutrition o excess.

Vascular derangements; hepatic, cardiac renal.

Vaso-motor.

Neurasthenia; causing hallucinations o astigmatism.

Neuropathic temperament.

Forerunner of mental disease; hysteria, hypochondria, and organic cerebral or spinal affections.

A form of insanity; and interchangeable psycho-neurosis.

The American Society of Microscopists—

Will hold its fourteenth annual meeting in Washington, D. C., August 10th, and continue in session five days. Its roll of active members contains about three hundred and

fty names, the membership consisting of rofessional men and students of the natural iences (who use the microscope in their aily avocations as an instrument of research, iagnosis, or precision) and amateurs. In its arlier years the latter predominated in the iembership of the Society, but at present the rofessional element is largely in excess. he qualifications for membership are very mple. The applicant must be a respecta- le person socially, and interested in the use the microscope. The dues are $2 per nnum, and the initiation fee $1. Applica- ons for membership should be made to the ecretary, Dr. W. H. Seaman, No. 1427 leventh Street, Washington, D. C. The pplication should be accompanied by $3, hich is the initiation fee and one year's ues.

enerous Gift to Tulane University.—

The Medical Department of Tulane Uni- ersity, New Orleans, was made, June 13th, ie recipient of a generous donation from Irs. Richardson, wife of that eminent physi- an and Dean of the college, Dr. T. G. Rich- rdson, of $100,000. The entire donation is ntended to be used in erecting a new col- ge on Canal Street, between Vellere and obertson Sts., the site for which was bought few days ago for $35,000 by the Educa- onal Board.

The Medical Department of the University as selected Dr. Edmond Souchon, Professor f Anatomy and Clinical Surgery, as the rep- esentative of the faculty in the selection of ie proper sort of building for the purpose ntended. Dr. Souchon will leave in a few eeks for the North and East, to examine arious colleges to guide him in the selection f a building that will be best suited to the ants of the local institution.

. New Food.—

Lacto-Cereal food is a new product recently ut on the market by Reed & Carnrick, of ew York.

It is prepared from milk, cereals and fruit, nd is not only palatable, but highly nutri- ious and easily digested.

Great progress has been made in recent ears in making foods to meet various indi- ations. The lacto-cereal food is especially prepared for invalids, the aged, and for con- valescents who need a palatable, digestible, perfect food for building up waste tissues at the least possible expense of digestive effort. —*Dietetic Gazette.*

A New Medical Journal Advertising Agency.—

Dr. A. L. Hummel, of 612 Drexel Build- ing, Philadelphia, and Mr. Chas. Roome Parmele, of 19 Park Place, New York, have entered into a copartnership, operating under the firm name of Hummel & Parmele, the business of which copartnership shall be that of a medical journal advertising agency. All contracts made by or with A. L. Hummel or Chas. Roome Parmele, individually, since January 1st, 1891, are assumed by Hummel & Parmele.

Sun-Hats.—

The Indian Medical Record, in a review of the question of the proper hat to wear in hot climates, concludes that a sun-hat, to be perfect, should ensure: (*a*) Protection with shade or covering to the head and nape; (*b*) lightness of material for the purpose of com- fort; (*c*) coolness, if possible, by the inter- change of the stratum of air round the head and thus afford additional safety; (*d*) with all these in their fullest extent it must also combine convenience and neatness.

The Bacillus of Leprosy.—

A telegram from Simla, dated June 12th, contains an important announcement, which points to a distinct advance in the bacteri- ology of leprosy, due to the researches of the members of the Leprosy Commission. It is to the effect that Drs. Bevan-Rake and Buckmaster have succeeded in cultivating the leprosy bacillus in serum. They were assisted in their researches by Surgeon- Major Thomson.—*London Lancet.*

Inebriety Legally Disqualifies the Physician.—

The Secretary of the State Board of Health of Iowa announces he is convinced habitual drunkenness constitutes "palpable evidence of incompetency," as the law reads, and there- fore, the physician bound by inebriety should be shorn of his certificate entitling him to practice in that State.

Therapeutic Brevities.

What is the Best Nutritive Enema?—Nutritive enemata, though often indicated in cases of œsophageal or gastric disease, are comparatively rarely used, because of the general skepticism as to their utility. Either they are of but little nutritive value, as in the case of bouillon, or are difficult of absorption by the rectum, as in the case of milk. Leube suggested, in 1872, the use of pancreatized beef-pulp, and afterward Ewald proposed the peptones of meat, and of cheese, as offering suitable material for rectal feeding. There is no doubt that the substances recommended by these writers are, in part at least, absorbed by the rectum; nevertheless, their use has never become general, because of the difficulty of their preparation. Ewald, as a result of further experiments, found that eggs, even though not peptonized, were to a considerable extent absorbed by the rectal mucous membrane. According to the Mercredi Médical, for April 1st, Huber, of Zurich, has recently repeated Ewald's experiments in Prof. Eichhorst's clinic, and announces that the absorption of raw eggs is greatly aided by the addition of common salt. The salt is well borne, and causes, as a rule, no irritation of the bowel. He considers that eggs beaten up with salt, in the proportion of 15 grains to each egg, are the best for nutritive enema. His method of procedure is as follows: Two or three eggs are taken, and 30 to 45 grains of salt are added. They are slowly injected by means of a soft-rubber tube carried as high up the bowel as possible. Three such enemata are given daily. An hour before each enema, the rectum is cleared out by means of a large injection of warm water.—*New York Medical Journal.*

The Physiological Action of Kola Nut.—Dr. Kotliar, wishing to elucidate the action of kola nut, which, as is well known, has been recommended for increasing the power of the body to undergo severe strain or work, has made a series of observations in Prof. Manassein's clinic in St. Petersburg, on the alteration of the chemical processes of the body when under the action of the drug. The observations were made on seven healthy young men, each being observed for two consecutive periods of five days. In some the drug was given during the first period, and the subject kept at rest from work. In others the subjects worked hard, and the drug was given during the second period. The quantity of powdered kola nut tak per diem was one drachm. From careful ana yses of the food and excreta, it was four that under conditions both of rest and wor kola increased the assimilation of phosphor and sulphur. That of chlorine was increas during rest, but was not altered by kola u der conditions of work. The metamorphos of chlorine was diminished by kola, both u der conditions of rest and work, especially the latter case. The metamorphosis of pho phorus was diminished both at rest and work, but more especially during rest; t same may be said of sulphur. Finally, t breaking up of phosphorus and sulphur cor pounds both during rest and work, as cor pared with that of nitrogenous compound was diminished. The paper is published Vratch, No. 19, 1891.—*Lancet.*

Treatment of Urticaria.—Quinquaud re ommends, in cases of intermittent urticari quinine, but preferably arsenic. In the chron form, baths and hydrotherapy in all forms a to be absolutely forbidden. On the oth hand, wrapping the patient up in cotton ba ting is often excellent. Internally alkalie arseniate of soda, etc., are indicated.

For the pruritus he advises:

℞ Aq. lauro-cerasi, 50. grammes.
Chloral, 5. grammes.
Aquæ, 200. grammes.
M.

Or:

℞ Ether, 30. grammes.
Tepid water, 60. grammes.
M.

Also a powder for dusting on the surface:

℞ Amyli, 50. grammes.
Zinci oxid., 10. grammes; or, Acid. salicyl 5. grammes.
M.

When fresh outbreaks supervene, on fourth of a milligramme of aconitine in d vided doses will prove serviceable.—*La Tri une Médical.*

Treatment of Gonorrhœal Rheumatism.—I a discussion on the treatment of gonorrhœ rheumatism, at a meeting of the Paris Soci Dermatologie et Syphiligraphie on May 14t (Semaine Médical, May 16th, 1891), M. Ju lien said that, having regard to the infectio origin of the disease, he had for the last fiv years systematically treated it with subcut neous injections of bichloride of mercur with extremely satisfactory results. M. B Besnier pointed out that joint inflammatio

gonorrhœal origin often spontaneously ndergo rapid modifications, which make very difficult to judge of the effect of par- ular remedies. In his experience, local eatment is the most important therapeu- factor in such cases, and he placed most liance on the method recommended by M. icas-Championière, which consists in uching the parts in a number of places th the point of the cautery, and then wrap- ng the joint in Vigo's mercurial plaster, th cotton-wool dressing afterwards. M. Castel said he had tried mercurial friction one case without result, while in another, which, however, the inflammation was less vere, it had done a great deal of good.

Things Worth Knowing.—It is worth know- g that a perfect Graham bread is possible r dyspeptics. This bread can be eaten th safety, and with the absolute knowledge at it will be assimilated and nourish the sys- m. It is made of equal parts of Mosquera's eef Meal (the product which science has tely given to the world, consisting of beef e-digested by pine-apple juice), Graham our, and white flour. To one cupful of each, ld a teaspoonful of salt, and two-thirds of cupful of molasses or clean brown sugar. to warm milk enough to make a soft ough, dissolve a compressed yeast cake. ix, and put in warm place to rise. When ry light, knead down, and let rise again. his will make one good-sized loaf or two nall ones. For dyspeptics the two loaves e preferable because of the greater amount crust. Bake from half an hour to three- uarters in a moderate oven.

Administration of Anæsthetics to Children.— r. Ness, in a discussion published at a re- nt date in the Glasgow Medical Journal, ports 1,000 cases in which anæsthetics were nployed at the Hospital for Sick Children. all these cases careful notes were taken, id there were at least a thousand more of hich no record was kept. Chloroform was most invariably used, ether being employed ly in exceptional cases. No death has ever curred during the administration of an an- sthetic. The mode and details of adminis- ation were not given.—*N. Y. Med. Jour.*

A Local Anæsthetic.—

℞ Cocainæ, 5. grammes.
Analgesini, 15. grammes.
Aquæ, 80. grammes.
M.

Medical Progress.

THE NUTRITIVE VALUE OF BEEF PREPARATIONS.*—I have been asked to consider this subject mainly from the chemical standpoint, and to furnish some information regarding the nutritive value of the various preparations which, as concentrated foods, are at the disposal of the physician and the public in general. It certainly is an important matter, one in which we are all interested, for there are many cases in a physician's practice when it is a question of nutriment rather than of medicine, and we certainly as much need a definite knowledge of the nutritive properties of the foods we employ, as of the medicinal virtues of the drugs of which we make use.

Let us consider first some of the principles which should guide us in forming an estimate of the nutritive value of a food preparation.

It is a well-understood physiological law that the proteid or albuminous food-stuffs are essential to animal life. They alone contain the peculiar groups of chemical elements necessary for the upbuilding of animal tissues and for the renewal of the worn-out structures of the animal body. The cells and tissues of animal organisms, together with the majority of the animal fluids, are composed in great part, aside from the water they may contain, of albuminous matter or closely allied derivatives. During the life of the organism this material is constantly undergoing decomposition, and to make good this loss new proteid matter must be supplied. An increase in the amount of non-nitrogenous food will not supply the lack of proteid matter, for, as is well known, continued deprivation of nitrogenous food-stuffs will ultimately result in nitrogen-starvation and death. Hence, no substance can serve permanently as food for the human body unless it contains a certain amount of this peculiar nitrogenized matter in a readily assimilable form. Further, it is not enough that a food contains nitrogen, but this element, to be of use to the body, must be combined in some peculiar way, as in the proteid molecule. Even such closely related nitrogenous substances as collagen and gelatin will not fully take the place of a true proteid, though containing as large, or even a larger, percentage of nitrogen. This is a point which needs to be emphasized, for we hear so much about the importance of nitrogen in

* Read before the Philadelphia County Medical Society, May 13th, 1891, by R. H. Chittenden, Ph. D., Professor of Physiological Chemistry in Yale University.

the economy, that we are liable to overlook the fact that nitrogen *per se*, or in the majority of its combinations, is valueless; that it is only in one peculiar form that nitrogen can be utilized by the animal organism, viz., in the form of proteid matter.

The proteid food-stuffs may therefore well be called the essential food-stuffs, in distinction from the accessory, as the fats and the carbo-hydrates. They serve a double purpose in the economy; they not only furnish by their metabolism a considerable amount of energy to supply the general needs of the body, but, as already said, they especially constitute the tissue-building and tissue-restoring foods, and as such are absolutely indispensable to the well-being of the organism.

It has been generally assumed that the animal and vegetable proteids have approximately the same nutritive value. This, however, is probably not wholly true, since there is a noticeable difference in the chemical composition of the two forms—a difference which might well be assumed to have some degree of significance. As a rule, to which there are marked exceptions, vegetable proteids contain somewhat more nitrogen and a correspondingly less amount of carbon than the animal proteids. Now it is well known that nearly all of the nitrogen entering the body in the form of proteid matter is ultimately eliminated as urea, but the amount of carbon contained in the urea is not equal to the carbon contained in the proteid matter ingested; in other words, the proteid food, in serving its purpose in the economy, is apparently broken down into a urea moiety containing practically all of the nitrogen, together with a portion of the carbon of the original proteid matter, while there remains a carbon-containing residue which may be either oxydized at once, or stored up in the body as glycogen or fat for possible future use. Hence, it has been argued that the lower the content of nitrogen, and the higher the content of carbon, in a proteid substance, the greater its nutritive value.

This view, which in general favors the idea of a higher nutritive value for animal proteids, must, however, be considered in connection with the relative digestibility and assimilation of the two classes. Such experiments as have been tried (mainly upon dogs) appear to indicate that the albuminons matter of muscle-tissue, and the proteids of the blood, for example, are more readily digested and absorbed than many of the vegetable proteids, such as the gluten of wheat; and if this should prove to be a general rule, it would constitute an additional reason for assuming a relatively higher nutritive value fo the animal proteids. There is, further, a additional reason for this generally accepte view—one which is dependent upon the a sociation of the proteid, rather than upon th character of the substance itself. Thus, th most common form in which the animal pro teids are taken as food, is flesh or muscl tissue, in which the albuminous matter o the tissue is intimately associated with th nitrogenous extractives contained in th muscle-serum. These latter bodies unques tionably possess stimulating properties, an to this fact is to be ascribed, in part at leas the more invigorating action of the anima diet. Furthermore, the observations and ex perience of clinicians, the world over, hav clearly pointed to the greater value of an mal food in all conditions, either in prolonge illness or in prostration from any cause, whe it is necessary to provide nourishment in form capable of promptly invigorating th bodily powers, and with the least expend ture of energy on the part of the economy.

It has thus come about quite naturally that beef, being perhaps the most convenien form of animal material, has almost univer sally been employed in the preparation o concentrated foods. At first, from lack o knowledge of the true nutritive value of pro teids, efforts were confined wholly to th preparation of concentrated extracts of beef in which practically all of the proteid or nu tritive matter of the tissue was rejected a either indigestible or worthless. When Lie big's extract of meat first came into use, i was looked upon as containing in a smal volume all of the nutritive and valuable por tion of the tissue. The chemists and physi ologists of that date even went so far as t say that the tasteless residue, left after ex traction of the flesh with hot or cold water was as worthless as a stone, ignoring the fac that this residue or proteid matter could b digested as well as the fresh tissue, and mad use of accordingly. Our knowledge on these subjects has steadily increased since then and it is now generally known that an ex tract of beef made after the old plan o extracting the meat with boiling water is practically devoid of nutritive power. This is shown by the chemical composition of such extracts, as illustrated, for example, by Liebig's and Armour's extracts of beef, as well as by physiological experiment. I have recently analyzed these two widely known preparations, and the results fully substan tiate the prevalent opinion regarding their nutritive value.

It is unnecessary, for our purpose, to make any comparison of these two products. They

:e essentially the same, both being com-
osed mainly of the soluble extractives and
norganic salts of muscle-tissue, the former
:presenting the waste products of muscle-
etabolism. The content of nitrogen in
oth preparations is large, but this nitrogen
not to any extent available for the nutri-
on of the body. It exists, not in the form
f proteid matter, but as a part of certain
rystalline nitrogenous bodies soluble in 80
er cent. alcohol. One of the most impor-
nt of these is creatin, a body always pres-
nt in extracts of muscle, but which has lit-
e nutritive power. Introduced by itself into
ne animal system, it is neither stored up or
sed up, but simply excreted in the urine,
ractically unchanged. In the same man-
er, an extract of beef, taken as food, fails to
now any direct nourishing power; it does
ot diminish the amount of true food re-
uired to keep up nitrogenous equilibrium
: to sustain the bodily powers. Further,
ccording to Kemmerich, an animal fed upon
n extract of beef alone, will succumb more
:adily than a like animal entirely deprived
f food. Hence, the nutritive value of meat
r muscle-tissue, evidently, does not lie in the
oluble extractive matters, but rather in the
:jected insoluble proteid portion of the tis-
ue. Such extracts, however, are not by any
eans to be considered as worthless; they
ave, it is true, little value as foods, but, on
ne other hand, are possessed of certain
imulating properties which render them of
ore or less value as stimulants or restora-
ves. Among other ways, this stimulating
ction is manifested by a quickened and
ronger heart-beat, mainly due, it is said, to
ne large amount of potash salts in the ex-
act. An extract of beef may, therefore, be
kened to an alcoholic stimulant rather than
a food. This, indeed, has for some time
een recognized, and hence to supply the
emand for a more nutritive product than
ne ordinary extract of beef, there has arisen
class of preparations under the name of
eef juice or meat juice, which are stated to
ossess the nutritive properties of choice
eef to a high degree, as evidenced by the
esence of soluble albuminous matter. Such
eparations, however, as I have analyzed,
iled to show in their chemical composition
ny evidence of great nutritive power. Thus,
n analysis of Valentine's Meat Juice, and of
yeth's Beef Juice, shows them to be possess-
l the ordinary characters of dilute meat-
xtracts, with a small addition of soluble
bumen; this addition, however, is too
nall to have any practical significance.
ertainly, a food which contains only one-
lf of one per cent. of proteid matter, cannot,
in any sense, be termed a concentrated nu-
trient. Aside from this small amount of
soluble albumen, these preparations are in
no wise different, chemically, from an ordi-
nary extract of beef, except that they are
less concentrated.

As illustrations of a somewhat different
kind of soluble food, containing considerable
soluble albumen, we have Murdock's Liquid
Food, and "Bovinine," or Bush's Fluid Food.
Chemically, these two food products are es-
sentially the same. Both contain only a
small amount of solid matter (16 to 19 per
cent.), but this is mostly nutritive, being
composed in great part of soluble albumen.
The appearance of the products, together
with the small amount of mineral matter,
and especially the small amount of phos-
poric acid, would indicate they are not pre-
pared from muscle-tissue, but rather from
blood. Further, all or nearly all of the ni-
trogen in these preparations is available for
nutriment, as it exists in the form of proteid
matter. Thus, in Murdock's Food, if the
percentage of nitrogen, 2.29, be multiplied
by the factor 6.25, on the assumption that
the proteid contains 16 per cent. of nitrogen,
the result is 14.31 per cent., just equal to the
amount of soluble albumen found. Neither
of these preparations is, however, equal in
nutritive value to fresh lean beef, unless the
soluble character of the albumen should tend
to render it more easily available by the sys-
tem, and thus raise the nutritive value con-
siderably above the point indicated by the
percentages of nitrogen or proteid matter.

In Johnston's Fluid Beef, an attempt has
apparently been made to obtain a prepara-
tion which should possess the stimulating
properties of a simple extract of beef, and at
the same time have the nutritive qualities of
the tissue itself. This product apparently
consists, as indicated by the analysis, of an
extract of beef to which has been added a
portion of the insoluble tissue ground to a
fine powder, and the mixture evaporated to
a pasty consistency. Apparently, the soli-
tary proteids of the tissue have been coagu-
lated in the process, since the preparation
contains no soluble or coagulable albumen.
Of dry insoluble matter, the analysis shows
10.02 per cent., of which 9.12 per cent. is in-
soluble proteid matter. This practically re-
presents the bulk of the truly nutritive mat-
ter contained in the preparation. The re-
mainder of the nitrogen-containing substance
is soluble in hot and cold water, being com-
posed in great part of crystalline extractives,
soluble in 80 per cent. alcohol, although
there is likewise present some soluble gela-
tin or gelatoses, apparently formed by the

hydrating action of boiling water on the collagen of the connective tissue. These, however, as previously stated, have little or no real nutritive power.

In any preparation of powdered meat, or of other insoluble proteid matter, there is a great tendency for the nutritive value of the product to be impaired by the long-continued drying to which the proteid material is subjected. The digestibility of the preparation is thereby diminished, and in a corresponding degree its nutritive power. Hence, in many cases the plan has been adopted of predigesting a portion of the proteid food-stuff prior to its desiccation, by which treatment the proteid matter is rendered partially soluble and diffusible, and hence more readily available, especially for weakened digestive organs. Such preparations, if properly made, must necessarily possess high nutritive value. As an illustration of such a food, I have analyzed a sample of Beef Peptonoids, manufactured by the Arlington Chemical Co., which I understand is prepared from the flesh-forming elements of beef, wheat, and milk. At first glance, the small amounts of water and mineral matter in this preparation, together with the large quantity of soluble matter (more than half the water-free substance), are strongly suggestive of possibly high nutritive value. This, however, is at once contradicted by the low percentage of nitrogen, which cannot mean at the most more than 27.6 per cent. of proteid matter. In reality, about three-fourths of this preparation is composed of non-nitrogenous matter, mainly starch and sugar. Of soluble products of digestion—albumoses and peptone, directly available as nutriment—it contains only 7.31 per cent.; of insoluble proteid matter, about 20 per cent., of which certainly a large proportion is in the form of vegetable matter. Hence, as a concentrated tissue-restoring food, it is far below the possibilities. Taking the amount of total proteid matter as an index of its nutritive value, it is about 1.4 times as concentrated as fresh lean beef.

Another preparation of this same order, but which shows a much more promising chemical composition, is Mosquera's Beef Meal, a predigested, powdered meat. Its composition indicates that, aside from the small percentages of water and inorganic salts contained, the entire product is composed of nutritive matter; in other words, about 90 per cent. of the preparation is nutriment, of which 77 per cent. is albumnoid matter, 29.43 per cent. in the form of olub le products of digestion (albumoses and iepto ne) ready for immediate assimilation. In other words, nearly all of the dry matter soluble in water (31.26 per cent,) is composed of proteid substances directly available for the needs of the body, with a minimum amount of work on the part of the digestive system. That portion of the product insoluble in water is composed almost wholly of albuminoid matter and fat. This albuminoid or proteid matter (47.8 per cent.), however, is, I think, in a form more easily available for nutriment than ordinary dried muscle-tissue. In order to make clear my reasons for this belief, I must digress for a moment to call attention to the character of the digestive ferment employed in the peptonization of the beef-tissue. A short time ago it was discovered that the juice of the pineapple contained a ferment capable of digesting proteid matter. This fact has, I understand, been made use of in the preparation of the food-product named, the process consisting essentially in digesting fresh beef with the juice of the pineapple until the proteid tissue is partially peptonized, and then desiccating the product. At present, experiments are being carried on in my laboratory with a view of ascertaining something regarding the chemical and physiological action or this peculiar ferment, which, up to the present time, has not been scientifically studied. The juice obtained from a ripe pineapple is decidedly acid, possessing, on an average, an acidity equal to about 0.3 per cent. of hydrochloric acid. This juice possesses in a marked degree the power of dissolving proteid matters, especially coagulated egg-albumen and blood fibrin. This proteolytic action is apparent both in an acid and in a neutral fluid, the action being most energetic, however, when the fluid is neutral. Such portion of the albumen as is dissolved is converted into soluble albumoses and peptone, but we have noticed that when an excess of proteid matter is present, this excess, although not dissolved, is plainly acted upon, being disintegrated and giving other evidence of some kind of change which apparently renders it more readily soluble in the natural digestive juices than ordinary muscle-tissue. For this reason I am inclined to the belief that the insoluble proteid matter of the Mosquera Beef Meal is more readily available for nutritive purposes than ordinary desiccated beef.

REMEDY FOR MIGRAINE.—

℞ Caffeini citrici, 0.9 gramme.
Phenacetini, 0.1 gramme.
Sacch. lactis, 0.2 gramme.

M. Ft. chart. No. 5. Sig.: One powder every 2 hours until relieved.

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Original Articles.

COCAINE AS A LOCAL ANÆSTHETIC IN CASES REQUIRING AMPUTATION OF THE DIGITS, WITH A REPORT OF FIFTY SUCH OPERATIONS IN WHICH THE DRUG WAS EMPLOYED.

BY LEWIS H. ADLER, JR., M.D.*

Cocaine, used correctly and judiciously, furnishes the surgeon with a local anæsthetic *par excellence*. It is the improper employment of the drug that is the frequent cause of failure and consequent chagrin of the operator.

The writer has used cocaine to produce local anæsthesia in over one hundred and fifty cases of minor surgery,—such as the amputation of fingers and of toes, the revulsion of ingrowing nails, the extirpation of pedunculated growths, in circumcisions and in the excision of the uvulæ,—and has yet to experience the slightest untoward result, either from the immediate use of the drug or from its asserted liability to produce subsequent sloughing in the wound.

The following is the method which is carried out in cases requiring amputation of one or more digits:

The entire hand or foot—as the case may be,—is thoroughly cleansed and rendered as antiseptic as possible. The instruments are immersed in a solution of carbolic acid (1 to 40).

A piece of small-sized rubber tubing is now made to twice encircle the base of the finger or toe to be amputated, and is then securely tied; if the ends of the tube are long and permit of being carried across the back of the hand or the upper surface of the foot, they may be tied, for the convenience of the operator, around the wrist or ankle. When the amputation involves the metacarpal joint, the binding, of course, cannot be placed at the base of the finger, but is passed twice around the metacarpal bones of the fingers (thumb being excluded), and then tied.

The reasons for using tubing instead of a solid elastic ligature are: That more uniform constriction of the tissues is permitted, and there is less liability of injuring the softer structures of the part.

The next step in the operation is the injection of the cocaine solution; but before this is done, several points of considerable importance, and bearing largely upon the success of the operation, must be carefully noted:

1. The syringe and needle used must be rendered antiseptic. This is best done by washing them *both* in a solution of carbolic acid. It will not suffice to clean the syringe and forget the needle, as I have observed physicians do on more than one occasion.

2. The cocaine employed must be the pure alkaloid. An adulterated article may not only fail to produce anæsthesia, but its use will likely be followed by suppuration.

3. A fresh solution of the drug should be employed. I have used, with entire satisfaction, a solution of at least two months' standing, prepared with boracic acid. The following is the formula:

℞ Cocaine hydrochlorat., gr. xx.
Acid boracic, gr. xv.
Aquæ dest., f ℥ i.
M.

I never use a stronger solution of the drug than four per cent. for several reasons:

1. A weak solution permits a minimum amount of cocaine to reach a maximum extent of surface. Hence, anæsthesia is produced over a larger area with a less amount of the drug than would be the case were a strong solution employed, and:

2. Individual susceptibility to the tonic influence of cocaine is greatly lessened, if not rendered *nil*, by the gradual introduction of the drug, as is permitted in the use of a dilute solution.

* Instructor in Rectal Diseases, Philadelphia Polyclinic and College for Graduates in Medicine.

Number.	Name.	Age.	Extent of Injury.	Part or Parts Amputated.	The Quantity of a 4-per-cent. Solution of Cocaine used.	Anæsthetic Effect of the Drug.	Presence or Absence of Suppuration after Operation.	Length of Time Patient was under Treatment.	Remarks.
1	James B.....	17	Three fingers crushed	Distal joint of one finger, middle joint of the other two, removed	f. 3 iss	No pain after injections were made; slight pain upon insertion of sutures	No suppuration	3 weeks	Patient highly neurotic
2	Lizzie S. ...	14	Middle finger crushed	Distal phalanx removed	℥ xxxv	Perfectly satisfactory	" "	15 days	
3	Pauline H...	14	Index finger badly compounded; wound stitched, and fracture set—middle phalange necrosed	Middle of proximal phalanx	℥ xlv	Satisfactory	" "	30 days	Amputation performed one month after receipt of injury
4	Susan G.....	19	Crushed finger	Distal joint removed	℥ xxxv	Complete	" "	17 days	
5	Chas. W. P..	21	Crushed thumb	Above distal joint	℥ xxv	"	" "	3 weeks	Subsequent dressing of case was always followed by attacks of syncope
6	Harry J.....	27	Crushed finger	At metacarpal joint	℥ xxxv	"	" "	15 days	
7	Jane M.....	25	Crushed fingers (2)	Above middle joint of both digits	℥ xlv	"	" "	20 days	
8	Walter M. L.	52	Ends of all fingers of left hand removed by circular saw	Two fingers amputated at first joint and two at middle joint	f. 3 ij (about)	Some pain experienced, but only upon injection of solution	" "	26 days	
9	Frank R.....	26	Lacerated hand and crush of finger caused by a falling embankment of earth	Finger removed at middle joint	℥ xxv	Complete	" "	3 weeks	
10	Harry P.....	26	Thumb caught in a paper-cutting machine	Distal phalanx removed	℥ xxxv	"	" "	2 weeks	
11	Milton R. A.	27	Crush of three fingers	Two fingers removed at distal joint, and one at the middle joint	f. 3 iss	"	" "	25 days	
12	Andrew R...	34	Crush of thumb	Distal phalanx removed	℥ xxv	"	" "	2 weeks	
13	John C.....	17	Crush of index finger	Removed at middle of proximal phalanx	℥ xxxv	"	" "	17 days	
14	Sadie McL ..	23	Crush of finger	Removed at metacarpal joint	℥ xxv	"	" "	15 days	
15	John W.....	30	Crush of finger	Distal phalanx removed	℥ xxxv	"	" "	22 days	
16	Jas. U.....	28	Crush of thumb	Amputated at distal joint	℥ xxx	"	" "	20 days	
17	Jos. M.....	19	Index finger crushed	Removed at middle joint	℥ xxv	"	" "	22 days	
18	Alex. K.....	35	Crush finger	Removed at metacarpal joint	℥ xxv	"	" "	25 days	
19	Chas. S. C...	19	Crush index and middle fingers	One removed at metacarpal joint, and one at middle joint	℥ xlv	"	" "	23 days	
20	Wm. H.....	35	Three fingers crushed by a large piece of iron	Amputated proximal ends	f. 3 iss	"	" "	3 weeks	
21	Jacob B.....	29	Crush of finger	Removed at middle of second phalanx	℥ xxv	"	" "	17 days	
22	Frank A.....	15	Index finger crushed	Middle of proximal phalanx removed	℥ xxx	"	" "	20 days	
23	Chas. E. R..	31	Crush middle finger	Removed at metacarpal joint	℥ xxv	"	" "	15 days	
24	Samuel D....	21	Crush thumb and index finger	Amputated at distal and middle joints respectively	℥ xlv	"	" "	4 weeks	
25	Abr. B. C...	49	Three fingers crushed	Amputated at middle joint (2), and at distal joint (1)	f. 3 i	"	Pus found in one finger	4 weeks	This man was a railroader and belonged to the company's relief association, the doctor of which removed the dressing, hence the aseptic condition of one of the digits.
26	na U.....	16	Crush of finger	Removed at distal joint	℥ xxv	"	No suppuration	16 days	

Number.	Name.	Age.	Extent of Injury.	Part or Parts Amputated.	The Quantity of a 4-per-cent. Solution of Cocaine used.	Anæsthetic Effect of the Drug.	Presence or Absence of Suppuration after Operation.	Length of Time Patient was under Treatment.	Remarks.
27	John L.....	26	Crush of finger	Amputated at middle phalangeal joint	♏ xxx	Complete	.....	.....	Did not come back to dispensary for treatment; preferred to go to his family physician.
28	Cath. R.....	35	Thumb crushed	Distal phalanx removed	♏ xxxv	"	No suppuration	20 days	
29	Wm. E. D...	19	Crush of finger	Distal phalanx removed	♏ xxxv	"	" "	19 days	
30	Gotlieb R....	41	Index finger caught in a meat-chopper	Amputated at distal joint	♏ xxv	"	Some suppuration	35 days	Could not account for pus.
31	Dan'l G. W..	26	Crush three fingers	Two amputated at distal joint, and one at the middle joint	f. ʒ iss	"	No suppuration	29 days	
32	Pat. S.....	27	Crush index finger	Amputated at middle joint	♏ xxv	"	" "	19 days	
33	Frank D. T..	22	Crush finger	Removed at the metacarpal joint	♏ xxv	"	" "	24 days	
34	Jas. L. McG.	18	Crush finger	Removed at distal joint	♏ xxv	"	" "	15 days	
35	Wm. A. V...	32	Crush of thumb	Removed at metacarpal joint	♏ xxxv	"	Some suppuration	29 days	At the end of two weeks, removed a piece of necrosed bone, after which, part healed without further trouble
36	Frank T.....	21	Crush of big toe	Removed at distal joint	♏ xxxv	"	No suppuration	22 days	
37	Cornelius J. K.	21	Crushed finger	Removed at distal joint	♏ xxv	"	" "	15 days	
38	Wm. M.....	16	Crushed big toe	Removed at distal joint	♏ xxxv	Some pain complained of while sutures were being inserted	" "	20 days	
39	Jos. S.....	28	Crush of two fingers	Removed one at metacarpal joint, the other at the middle joint	♏ xxv	Complete	" "	20 days	
40	Jos. L.....	51	Crush of thumb	Amputated at distal joint	♏ xxx	"	" "	17 days	
41	Wm. M.....	24	Crushed big toe	Amputated at distal joint	♏ xxx	"	" "	22 days	
42	Jackson H...	14	Crush two fingers	Both removed at metacarpal joint	♏ xlv	Considerable pain whilst solution was being injected, none subsequently.	" "	4 weeks	
43	Albert B.....	19	Crush of big toe	At distal joint	♏ xxxv	Complete	" "	3 weeks	
44	Harry C.....	21	Crush of finger	" "	♏ xxxv	"	" "	17 days	
45	Jas. H. Y....	40	Crush of finger	At middle of second phalanx	♏ xxxv	"	" "	15 days	
46	Henry C. A..	29	Crush of index finger	At middle joint	♏ xxv	"	" "	24 days	
47	Wm. M.	34	Crush of three fingers	At middle joints	f. ʒ iss	Some pain upon injection of solution	Suppuration in one finger	4 weeks	
48	Isaac C. L...	29	Crush of finger	At distal joint	♏ xxxv	Complete	No suppuration	18 days	
49	Leonard Y..	23	Crush of finger	At middle joint	♏ xxxv	"	" "	17 days	
50	Chas. M. H..	41	Crush of four fingers	Removed two at distal joint and two at middle joints	f. ʒ ij (about)	"	" "	4 weeks	

The injection of the drug now demands our attention, and the manner of performing this step is a matter of no small importance, as bearing upon the success of the operation.

The needle is inserted, in the case of an amputation for injury, into the tissues of the wound, as near the seat of operation as possible, and as the needle is pushed downward, the solution is injected, drop by drop, into the soft parts. The needle is then withdrawn and the same procedure is repeated at two or three other points, and finally, as a last resort, one or more injections are made through the skin in the neighborhood of the proposed incision.

The reasons for leaving the skin punctures until the last are:

1. Little, if any, pain is occasioned the patient, as the previous injections into the tissues through the wound should produce cutaneous anæsthesia, before the punctures through the skin are attempted, and:

2. The natural sensitiveness of the skin is made use of by this method, as a test of the anæsthesia produced, and it is found to be a good guide as to the time to commence the operation. If the hypodermatic puncture causes pain, the anæsthetic action of the drug is not complete, and more of the solution is required.

When an amputation of the digits is performed for other causes than injury, and no wound exists through which the cocaine solution may be injected, it is of course necessary to make all the punctures through the skin; but this is not a very painful procedure, as the elastic ligature exerts a benumbing influence on the part.

The part being fully anæsthetized, the amputation is performed in the usual manner. It is at this point that many surgeons fail to observe an important step in operating with cocaine as the anæsthetic; and to which failure, and not to the use of the drug, is often attributable the untoward action of the remedy. At this stage of the operation, or, if desired, after the sutures are inserted, *but not tied*, it is of vital importance,—so far as the avoidance of toxic symptoms from the effects of cocaine are concerned,—*that the elastic ligature be gradually loosened and finally entirely removed and free bleeding from the stump be encouraged.* In this manner any excess of the drug is washed out, and such amount as is absorbed is slowly allowed to pass into the general circulation.

A couple of minutes suffices for this purpose. If necessary, the bleeding is now controlled, either by torsion or ligature and the sutures are inserted (if they have not been placed before) and tied. The wound is dressed antiseptically; dusted with boracic acid powder or iodoform, over which a strip of oiled silk is laid; next a layer of wet bichloride gauze, over which is placed a layer of the same kind of gauze, dry; next follows a piece of wax paper, and finally the bichloride cotton, a splint and a bandage.

About every three or four days a new dressing is applied and in from two to three weeks, the stump is entirely healed. During the process of healing, attention must be paid to the general health and to the state of the bowels.

The preceding (pp. 418–19) table shows the statistics of fifty cases of amputations upon the digits, performed for injury, in the dispensary and ward service at the hospital of the Protestant Episcopal Church.

In this series of cases, 33 single amputations were performed upon fingers and 4 upon the toes. In only one case was pain experienced, and then only during the insertion of the sutures. In two cases suppuration occurred; in one instance due to necrosed bone, no assignable reason for pus in the other case.

The average time it took a case to heal was about 17 days, the minimum time was 14 days, and the maximum time 35.

The quantity of solution of cocaine varied from 25 minims of a four-per-cent. solution to 30, 35 and 40 minims.

In five cases double amputation of the digits was necessary. In no case did pus form. In one case pain was experienced during the injection of the solution. The duration of the time occupied in healing varied from two to four weeks.

The quantity of solution required ranged from 40 to 45 minims.

Six cases were of triple amputation. In two cases suppuration ensued, and in a like number pain was experienced upon the injection of solution. Recovery from the operation occupied from three to four weeks. From a drachm to a drachm and a half of the solution was required to produce anæsthesia.

Two cases were of quadruple amputation, one of which was painful during the injection of the cocaine. These patients occupied respectively 26 and 28 days in getting well, and in each case two drachms of of the solution was required to produce anæsthesia.

From the experience had in these cases, the writer can safely draw the conclusion that cocaine is a safe and satisfactory local anæsthetic in those cases in which the circulation can be controlled.

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THE VALUE OF ANTIPYRIN IN COMBINATION WITH THE BROMIDE OF AMMONIUM IN THE TREATMENT OF EPILEPSY.

BY DR CHARLES M. HAY.*

The combination of antipyrin and the bromide of ammonium was first suggested by Dr. H. C. Wood, in September, 1888, and the first reported clinical experience with it has been published by Dr. Charles S. Potts (Univ. Med. Mag., Oct., 1890, p. 11), who found it exceedingly satisfactory in lessening the recurrence of the epileptic seizure. The results of Dr. Potts' use of these remedies in combination were: A marked reduction of the convulsive attacks, and the absence of those unpleasant symptoms which attend the use of either drug when persistently used alone. Brominism is so frequently a source of annoyance in epileptics, and moreover there is a good deal of evidence of the bad effects of large continuous doses of them, especially upon the mental condition of the patient, that the claims made for this new combination at once attracted my attention, and I began to employ it in the epileptic wards of the State Asylum at Morris Plains, N. J.

The cases in which I had an opportunity of trying this treatment were, generally speaking, very unfavorable ones, all being mentally diseased to some degree in connection with the epileptic paroxysm, while the majority were hopelessly insane; but, since they offered a good chance to compare its effects with other treatment, and since they were under continuous observation day and night, I considered that the conditions were most favorable for a reliable experience with these drugs, to determine their anti-convulsive power.

The following cases are abstracted from my notes of cases treated in this way, and they are not selected, but are consecutive trials of this treatment. The history is given when it could be ascertained.

CASE 1.—Male, aged 45 years. Family history shows predisposition to nervous disease, although no cases of epilepsy were known to have existed for two generations. Patient was partially demented, having had fits from boyhood, which commenced without appreciable cause. No objective symptoms of intra-cranial lesion, and good health was otherwise enjoyed.

For eight months previous to commencement of this treatment, he had, on an average, thirteen convulsions a month, all extremely violent, and attended by pre-epileptic mania of short duration. During this time he was taking nitro-glycerin, gr. $\frac{1}{100}$, four times daily, increased to four times daily during last two months. In October he was placed upon bromide of ammonium, gr. xx, with antipyrin, gr. vii, and at the end of one month the antipyrin was increased to gr. x in each dose. In all, he took this combination three months, with the following result: During the first month he had twelve seizures; during the second, nine; and during the third month, only three fits. The character of the fits was modified favorably, and he was far less violent than usual, according to the statements of his nurse. He then passed from under observation.

CASE 2.—Male, aged 30 years. Family history uncertain. Had fits from his birth. No evidence of any cranial lesion. Mentally he was classed as a case of mild chronic mania due to epilepsy. In eighteen months previous he had an average of twelve convulsions a month, during which time he was given antifebrin, gr. viii, three times a day. He was placed upon antipyrin and bromide of ammonium, and it was continued for three months and a half, during which time he averaged eight fits per month. The dose was the same as in Case 1.

CASE 3.—Male, aged 38 years, native of Holland. Convulsions date back fifteen years to an injury received at that time. No deformity of skull noted, nor scar of any kind. Patient had unusually violent attacks, with acute mania preceding them for some hours. After a succession of fits he would fall into profound coma lasting generally four days, and after this the man would be dazed and stuporous for a few days more, when he would become sane and remain so until the next attack. He had received a prolonged course of the bromide of sodium, and various other drugs, without any favorable result, either in lengthening the period

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between the attacks, or in modifying their severity. The combination of antipyrin and bromide of ammonium seemed to possess decided power in both of these directions, for during the three months it was administered the attacks were mild, unattended by mania, and only followed by a comparatively slight degree of coma. Instead of the *status epilepticus* which commonly developed during his attacks, he had two or three fits within a few hours, and in twelve hours would become sane again. In this case the treatment was bromide of ammonium, gr. xx, with antipyrin gr. x, three times a day. No other symptoms presented themselves in this case, except the convulsive attacks and their prodromes and sequelæ.

Case 4.—Male, aged 29; occupation, carbuilder. No hereditary predisposition to epilepsy or insanity. Habits temperate, except that at the age of fifteen he was addicted to masturbation, and in his eighteenth year his intellect failed a good deal, and he shortly afterwards commenced to have epileptic convulsions. These continued to increase until his twenty-fifth year, when he regularly had one a day. When under strict bromide treatment they decreased, and during the period between his thirty-second and thirty-sixth year of age, he had only an average of one a month. Then, despite continued treatment, they slowly increased, and during his thirty-seventh year his average was twenty-one fits a month. During the next year he came under my care, and the bromides were pushed to their full physiological effects, with the result that his average of convulsions for the year fell to fifteen fits a month. Then he was placed upon antipyrin, gr. x, with ammonium bromide, gr. xv, three times a day, and during the following three months he had fits as follows: During the first month of treatment he had ten; the second, seven; and the third, three fits. His mental condition remained unimproved, he being far advanced in dementia. The character of the convulsions remained as before, typical attacks of *grand mal*.

Case 5.—Male, aged 23 years. Family history indicated a marked predisposition to nervous disease.

Patient had fits in early childhood which continued at intervals, finally becoming frequent after the age of eight years, and they were attended by a progressive loss of the mental faculties, so that during the time he was under my care, he was exceedingly "feeble-minded." The average number of convulsions a month, during the twenty-five months prior to Oct., 1890, was found to be forty-nine, but for eight months immediately preceding the same date, his fits averaged sixty a month. For several years he had been systematically treated with all the remedies commonly employed in epilepsy, without any marked reduction of the attacks, and was taking bromide of sodium, gr. xxx, three times daily during the eight months mentioned. He was placed upon antipyrin, gr. vii, with bromide of ammonium, gr. xx, three times a day, and this treatment has continued for three months, with the following result: During the first month of treatment he had only nineteen convulsions; the second, thirty-three; and the third, thirty-seven, thus giving an average of 29.66 fits per month for the time he was under treatment, against his average of sixty per month, for the eight preceding months.

Case 6.—Male, aged 20 years. No history of faulty hereditary organization. Was a healthy child, and well until thirteenth year, when he contracted a habit of jumping from high places, and to this his physician attributed the subsequent attacks of *petit mal*. These were at first very mild but frequent, being in number three or four a day. In three months the first attack of major epilepsy occurred. He grew worse under the most persistent careful treatment, and when he came under my observation was much demented. He usually had from five to ten violent fits every two weeks with prolonged coma, followed by very mild uncontrollable post-epileptic mania. He was given antipyrin, gr. x, with bromide of ammonium, gr. xx, three times a day, without any good result either in the number or character of his attacks, or their sequelæ. It was discontinued after two months trial.

Case 7.—Male, aged 46 years; laborer; native of New Jersey. Father and paternal grandfather were dipsomaniacs. Patient began to have epileptic fits at the age of ten years, and they continued until his admission six years ago, at which time he began to be

maniacal at his convulsive periods, which occurred two or three times a month. Ever since admission he had received systematic courses of treatment, chiefly the bromides, and was taking bromide of sodium, gr. xxx, three times daily, when he was placed upon antipyrin, gr. x, with bromide of ammonium, gr. xx, three times a day. During the previous six months he had in all twelve convulsions, and during the three months he was given this treatment he only had one convulsion, and was much less irritable than usual, while his solitary fit was unattended by any maniacal disturbance.

Case 8.—Male, aged 18. Congenital idiot, with frequent epileptic seizures. Family history very bad. Convulsions date back to childhood. For thirteen months prior to trying this mixture, during which time he was successively treated with the bromides, belladonna, ergot, nitro-glycerin, and antifebrin, he had an average of seventy-four convulsions a month. He was given antipyrin, gr. viii, with bromide of ammonium, gr. xx, three times a day, and for the *first time* a reduction in the number of fits occured, the average number per month for three months falling to sixty.

Case 9.—Male, colored, aged 34 years. Family history unknown. Had fits from childhood, and at the time he came under observation, in October, 1890, was having one a day, with prolonged coma and stupor following each. He was immediately given antipyrin, gr. x, with bromide of ammonium, gr. xv, three times a day, which reduced the number of fits to one in two weeks, at the end of two months' treatment; and during the third month of treatment he had no convulsive seizure, while his mental condition was sufficiently improved to allow of his resuming work as a farm-hand.

Case 10.—Male, aged 20 years; laborer. Family history uncertain. Epileptic since age of eight years, following the entrance of a sharp picket just below the left orbit, from a fall. Convulsions always begin with local spasm of left side of face, continuing four or five minutes before the general epileptic convulsions appear. In November, 1890, had first atttack of mania, after a fit; and in October, 1890, he was put on same treatment as the preceding case. Two months and a half of this treatment reduced his fits from four or five a week to an average of one a week.

These cases, which I have cited above, sufficiently and fairly represent the effects usually observed by me, in the use of antipyrin in combination with the bromide of ammonium; and although I have notes of twenty others, they give such similar results that I refrain from reporting them in full. My experience, therefore, amply confirms the results obtained at the University Hospital by Dr. Chas. S. Potts, and emphasizes the truth of Dr. H. C. Wood's claim for these remedies in combination. It will be noted that I have used this treatment only in the most hopeless forms of epilepsy, long after any cure could be expected, but if in such cases it has the power to prevent the recurrence of fits to a marked degree, in some cases certainly it will fulfill this indication also in less desperate cases of the disease. In some of my cases it failed to affect the convulsion rate, but in the great majority of cases it decreased markedly the convulsive attacks, and, as in some of the cases given above, after the bromides *alone* were powerless. Therefore it would seem that this mode of treatment is to be highly commended, not only for its beneficent effect in lowering the number of convulsions in epilepsy, but also because, by its use, the disagreeable gastric and general symptoms of brominism are avoided.

1843 North Eleventh St.,
Philadelphia.

MELÆNA NEONATORUM.*

BY JAMES NEWELL, PH. B., M. D.

The subject which I have taken for this paper is known by the name Melæna Neonatorum; a disease of infrequent occurrence, and characterized by the vomiting of blood from the stomach, and its discharge from the bowels *per anum*. It is a disease seen in the early days of infantile life. Fortunately for the safety of the child, it is comparatively rarely met with, as it is attended by a high rate of mortality. In a practice extending

*Read before the Wayne County Medical Society, July 2nd, 1891.

over 20 years, I have seen but few cases, and I will now relate the history of the last one which I had. Mrs. W., a healthy woman, aged 38 years, the mother of 8 children, of whom 4 survive, was taken with the pains of labor on Feb. 10th, last. On my arrival, I found the bag of waters protruding and the cervix fully dilated. I ruptured the membranes, found the presentation was occipito-left-anterior, and in less than an hour she was delivered of a healthy female child which weighed 7½ pounds. The second day after confinement, the nurse, a very intelligent woman and who had considerable experience in lying-in cases, informed me that the child had vomited that day, something of a black color, and showed me the cloth on which it had been caught. The vomited matter when seen was small in quantity, and had dried into the texture of the cloth, and looked very much in color like the aromatic syrup of rhubarb. I inquired if anything of the nature had been given to the child, and received a negative reply. As there had been no repetition of the vomiting, I dismissed it as of little or no importance. On the evening of the same day the father came to my office and told me the child was vomiting black looking blood. I saw the child immediately, and ascertained it had vomited black blood several times after I had left the house. It was not much depressed, appeared to be fairly strong, and took nourishment with relish and avidity. While I was there it vomited up at least 3 ounces of black grumous material, which on inspection proved to be partially broken down blood clots in a state of semi-digestion. I gave an unfavorable prognosis, and prescribed for the child, fluid extract of ergot in 3 drop doses, and acetate of lead, ¼ grain dose. Next morning I found the patient much the same; had vomited the black clotted blood several times, and had 2 or 3 passages from the bowels, of a black tarry nature, showing that the blood had been lost high up in the alimentary canal. The temperature was, in the axilla, 100°+. I continued the same treatment as before, in fact through the case I made no change in the medicine. Next morning I found the patient much the same, with little depression considering the relative amount of blood which had been lost. The vomiting and alvine passages were less frequent but still of the black color. Next day the vomiting and loss of blood by the anus had ceased and the child progressed to a speedy recovery. The temperature during the acute stage of the hæmorrhage was always about a hundred. I have met with but few, very few, cases of this disease in a practice of 20 years, and on account of its rarity and the fatality which attends it, think it worthy of report.

Regarding its cause, frequency and fatality, Dr. Robert Amory Hare, in the Cyclopædia of Diseases of Children, says:

"In very young children gastric congestion, the result of obstruction in the portal system or of inherent laxity of the gastric veins, is a very common cause of the state known as Melæna Neonatorum, a gastric hæmorrhage which frequently comes on during the first few days or weeks of life. It has been thought by some that a predisposing cause of this occurrence is difficult respiration after birth, resulting in general venous stasis; but this is hardly probable, since other vessels ought for the same reason to prove incompetent."

Strümpell, in his Text-Book of Medicine, says, in his article on gastric hæmorrhage:

"There is one peculiar disease to be mentioned, namely, the so-called Melæna Neonatorum. Children in the first week of life may, in some instances, suffer from gastric and intestinal hæmorrhage, with hematemesis and bloody stools. The cause has not yet been definitely made out. In a certain proportion of cases there are gastric or duodenal ulcers. In others the hæmorrhage is said to result from a disturbance in the circulation, due to insufficient respiration. The condition is rather dangerous, for most of the children die, although recovery may ensue in what may seem to be almost hopeless cases."

Wm. H. Flint, in Wood's Reference Hand-Book of the Medical Sciences, referring to this disease, says: "Niemeyer referred the so-called gastrorrhagia and melæna neonatorum to obstruction in the pulmonary circulation, caused by congenital atelectasis. It has, however, already been stated that melæna neonatorum is sometimes associated with

perforating gastric or duodenal ulcers, and is occasionally referable to hæmophilia."

Eichhorst, in his Hand-Book of Practical Medicine, remarks: "In a few cases, gastric ulcers have been observed in the stomach and duodenum. Henoch described one case in which the ulcer was situated in the œsophagus, immediately above the stomach. In some cases, we find merely congestions of the intestinal mucous membrane. In another group, there are signs of general dissolution of the blood. Opinions differ in regard to the ulcerative forms of melæna, whether we have to deal with the results of embolism or of hæmorrhagic infiltration of the mucous membrane. According to Bohn, the ulcers are the result of occlusion and suppuration of the gastro-duodenal glands. Steiner claims to have noticed fatty degeneration of the vessels of the mucous membrane. In many cases, no cause whatever could be discovered, the disease attacking well developed children of healthy parents. In some cases, difficult labor had been regarded as the cause of melæna, and it is said to be observed with special frequency in asphyxiated children. Finally, Kiswisch and Landau attach great importance to the too early ligature of the funis. Hecker observed it once amongst 500 births, and Genrich only once in 1,000 births." * * * "The prognosis is always grave, and on an average fifty per cent. of cases prove fatal. If the hæmorrhage has lasted longer than 36 hours, recovery is exceptional." Partridge, in an interesting paper read before the Practitioners' Society, and which appeared in the Medical Record of August 23d, 1890, describes a form of hæmorrhage (melæna neonatorum) in newborn infants of non-syphilitic parents during the first early days of life. It occurred in about one per cent. of infants born at the Nursery and Child's Hospital and at the Sloan Maternity. The mortality was from sixty to seventy-five per cent. He attributes its cause to the changed condition of functional activities, etc., the altered circulation, allowing a brief interruption of the nutrition of the vessel walls sufficient for the transudation of their contents.

Prof. James T. Whittaker, in Pepper's Medicine, says: "Melæna neonatorum is the distinct name given to a hæmorrhage from the bowels which occurs a few hours or days after birth, and which is often so profuse as to cause death at once, or in a short time. In most cases no anatomical lesion can be discovered after death, save an intense hyperæmia of the intestinal mucosa, so that the ætiology of this affection is involved in obscurity. * * * Betz reported a case in a family subject to hæmophilia, and Trousseau once saw twins thus affected, but that heredity can not account for all cases, is shown by the fact that it occurs mostly in healthy children from healthy parentage. Klebs is inclined to attribute the affection to the action of micro-organisms, introduced perhaps as the result of puerperal infection, but this cause can be assumed in only a small minority of cases. According to Rilliet, the hæmorrhage is oftener ($\frac{8}{11}$) intestinal, rarer ($\frac{4}{14}$) gastric, and rarest ($\frac{2}{14}$) both. It is almost always abundant and quickly repeated, the blood being mostly pure, in clots or masses, and fluid, though it is sometimes commingled with meconium. Of 23 cases reported by this author, 12 recovered and 11 died."

Henoch, of Berlin, in his Lectures on Diseases of Children, says it is a rare affection, and that he has only seen a few cases. He says that the hæmatemesis is sometimes absent, and rapidly following bloody stools take place, which at first contain meconium or fæces, but afterward consist purely of liquid and coagulated blood. Other symptoms may be entirely absent, and examination of the abdomen reveals nothing abnormal. In most cases deathly pallor develops within 24 to 48 hours, followed by cold skin, disappearance of the pulse, and death; but a small proportion of cases recover after cessation of the hæmorrhage. The mortality varies from 35 to 60 per cent.. "The views with regard to the development of this condition vary greatly. Billard explains the hæmorrhages from the congestion of the alimentary mucous membrane, which is normally present during the first few days of life, and may be increased by the disturbances of the venous circulation, as in asphyctic conditions, pulmonary atelectasis, congenital disease of the heart, enlargement of the liver and spleen." Speaking of the ulcers found in the stomach and duodenum, Henoch says: "There are

differences of opinion with regard to the development of these ulcers. While some regard their origin as inflammatory, others attribute them to ulceration of the follicles, or to fatty degeneration of the small arteries. Landau, basing his opinion upon a case of duodenal ulcer, with thrombosis of the umbilical vein, believes the ulcers to be of embolic origin, and produced by thrombi, which enter the small arteries of the gastric mucous membrane from the ductus Botalli or umbilical vein." Rehn regards the ulcerations as due to the presence of colonies of micrococci.

From the many divergent views regarding its pathogenesis, expressed by different writers on the affection, it will be readily conceived that it is a disease whose ætiology and pathology are enveloped in obscurity. To myself it has appeared to resemble, in many of its symptoms, purpura hæmorrhagica.

In my own case one factor which is alleged as a cause, namely, too early ligation of the cord, I am able to exclude. I did not ligate the cord until respiration was fully established, probably five minutes after the birth of the child. When severing the cord I accidentally cut it between the ligature and the child's body. This condition was discovered some time afterward by noticing the escape of blood from the funis.

As regards treatment, I believe that little can be done, and am rather skeptical as to there being much benefit to be derived from the administration of drugs. Henoch advises the application of cold fomentations or an ice-bag to the abdomen, and warm flannel to the extremities. If the child cannot take the breast, milk cooled in ice should be given. Liquor ferri sesqui chlorati (which is similar to the tr. ferri. chlor. of the U. S. Pharmacopæia), gtt. 1, may be given; also ergot or ergotin either by mouth or hypodermatically, may be beneficial owing to its action on the vaso-motor system. Acetate of lead is also worthy of trial from its well known hæmostatic action. If another case should occur, I would be inclined to give ol. terebinthinæ a trial, as I have found it of great value in hæmorrhages from the mucous membranes in purpura, after the trial and failure of other much vaunted remedies.

418 Grand River Avenue, Detroit.

TWO CASES OF LUPUS TREATED BY METHYL-VIOLET.*

BY M. F. COOMES, M. D.

I beg leave to make a report on some experimental work that I have done within the last few months, with a view of curing lupus.

The great interest taken in Koch's discoveries naturally awakened the medical mind to a new line of thought, and also aroused the invalids all over the land, who had been living in hope that something would eventually turn up which might lead to a cure, or mitigation of their ailments.

Being engaged in a special line of practice, it was but natural that those persons who were affected with the diseases, to which I gave my attention, would consult me concerning any new remedy that might offer a chance of relief.

On the 11th day of March I was consulted by Mrs. A. M., who was the subject of a lupus involving the interior and exterior portions of the nose. I examined her very critically, and, upon inquiry, found the disease began by the appearance of a small pimple on the side of the nose looking like a yellow blister, some year and a half before. At first she paid but little attention to it; but, instead of disappearing, it gradually grew in size, when she became alarmed and consulted Dr. J. M. Krim, who kept the case under observation until a short time before it came into my hands. It is due Dr. Krim to say, he used every means known to the profession, with a view to curing the disease, with negative results, and when it was asserted that Koch's "lymph" would cure, he insisted the patient should avail herself of its virtues; but this she absolutely declined to do, and discontinued the Doctor's services.

When I first saw her, there was a large open sore extending from the root of the nose to within a quarter of an inch of the lobe, or tip. Its area was about that of an inch by three-quarters of an inch. At the point where the septum joins the floor of the nose there was a large sore, extending from one alæ to the other. There was complete destruction of the bones of the nose—the turbinate and the septum; also a small sore

* Read before the Kentucky State Medical Society, May 29th, 1891.

on the upper lip, about the size of a split pea. Clinically speaking, all the sores were of the characteristic kind that are met in such cases, and their behavior from the beginning had been that of lupus. I investigated the case thoroughly as to the possibility of its being specific (syphilitic), but there could be no trace of that disease found either in the patient, her husband, or any of the family for three generations, so far as Dr. Krim and I have been able to determine.

Being an old woman, and the wretched condition she was in when I first saw her, made the case one of the worst it had ever been my lot to see. I could promise her nothing in the way of cure, and scarcely any hope of palliation. In fact, I told her that I thought the Koch treatment offered her the only hope, and insisted that she permit me or some one else to try the experiment. This she flatly refused, saying she was afraid of it, that her husband and children were also opposed to its use for fear of killing her. I went so far as to tell her I had treated a number of cases by the old methods, all with the most discouraging results, hoping to get her to release me from prescribing for her; but for some cause she insisted I should give her something. Finally, I ordered her a wash, more for cleansing purposes than anything else, remarking it would do no good as a curative agent, but to use it and report next day.

During the interval, it occured to me that if lupus was local tuberculosis, or some kindred disease, which was caused by a bacillus, those agents which stained the bacillus ought to kill it, and with that idea in mind, when the patient returned (on the twelfth day) I ordered her to stop using the wash, and ordered instead a solution of methyl-violet, one in one thousand, applied to the open surface once each day, after the sores had been thoroughly cleansed with saline washes and the peroxide of hydrogen (ten-volume solution). I saw the patient every day, and washed and dressed the sores myself, so there might be no mistake about its .being done properly. The improvement was rapid from the beginning, the sores healing as rapidly, or more so, for certain periods of time, than if they had been the result of traumatic injuries.

The improvement went on uninterruptedly until all of the sores were healed, which was on the thirteenth day after the first application. The ulcer on the top surface of the nose was the first to close. There has been no evidence of a return at this point. The next to close were the open surfaces on the interior of the nose; this occurred within a week after the closure of the sore on the top of the nose. There has been no tendency to a return of the disease in this locality. The sore on the lip was the last to heal, which was completely closed thirty days after the first application was made. Near this sore on the lip was a small white mass, beneath the true skin, that looked like a cheesy mass. I feared this was in some way connected with the disease, and, with a view of eradicating, I cut down and removed the mass as thoroughly as possible. This was followed by what might be called violent reaction, causing the original sore at this point to open up again and increase in size until it was half an inch long and nearly as wide. The base became much indurated, and for several days it looked as though the sore would spread over the entire lip; but, within the last ten days past, it has commenced to close up as the others did, and it is now healing rapidly, and if it continues, will be closed in a fortnight.

This woman has had no internal medication whatever, from first to last. I have avoided, purposely, the use of any agent that might in any way throw doubt on the result of the peculiar line of treatment pursued in this case.

The second case was that of a young lady who first visited me on the 14th of March of the present year. She is about eighteen years of age, blond complexion, and has many of the evidences of the so-called strumous taint. The lymphatics about her throat and neck are swollen, and, in the past, several large abscesses have resulted from the inflammation of these glands. Some sixteen months ago a small yellowish pimple appeared on the outer surface of the nose, near the tip or lobe. In this case, as in the first, the patient gave it little attention until it refused to heal and began gradually to spread. It was painless, aside from that which was induced by efforts to close it.

Medical advice was sought, and after a time it was determined to be a case of lupus; in this case, as in the other, the diseased area increased until the entire outer surface of the nose became involved. When I first saw her, it is safe to say the nose was three times its natural size, the open surface extending from the root downward so as to completely obscure the alæ, and extending some little distance up and through the anterior nares. There was on the right side of the face, directly over the superior maxillary bone, an open sore about the size of a split olive. There was also a decidedly diseased area involving the right upper eyelid, and also a small area in the external auditory meatus on the right side. The great enlargement of the nose, and its rough, nodular, suppurating surface, made the patient very unsightly, and rendered it necessary she seclude herself from everybody except her most intimate associates. Having been much encouraged by the short experience of Mrs. M.'s case, I determined to try the methyl-violet.

As in the first case, the improvement was rapid from the beginning, and those of my friends who saw the case from time to time, were as much surprised as I. The most marked influence on the sores was the diminution in the quality of pus, and the shrinkage of the tissues involved by the disease. In fifty days Miss O. B.'s nose was of normal size, and had only four small suppurating surfaces in the skin of the lower portion. The sore on her cheek was healed.

The area involved over the right eye never suppurated. One of the most marked features of this case was the frequent occurrence of abscesses just beneath the true skin of the nose. They always contained a whitish, creamy-looking pus, and when evacuated, healed up rapidly. Others did not appear in their place. At times, for two or three days, there would seem to be a cessation in improvement, and then, as if by magic, quite a large area of surface would clear up and seem to progress as before. Improvement began all over the nose, but seemed to be most rapid from above downward, and at this time the only tissues involved are those in the region of the alæ.

I have every hope of curing both cases, and make this report trusting that those who have patients with lupus will give methyl-violet a fair and impartial trial, conducting the work in a way as to leave no doubt as to what agent produces the relief. I have withheld the knowledge of the remedy from the general profession and the public, and the manner of using it, until I could become satisfied that it had at least some virtues as a therapeutic agent, even if not a cure for lupus.

Latterly, I have been using three parts of the methyl-violet to one thousand parts of water. In this case, as in the first, there has been no internal medication whatever, not even a tonic.

I give this to the profession for what it is worth, with the facts just as they occurred, hoping that others will take this subject up and determine what appears to me, from a very limited experience, to be a great boon to the human race. If it does nothing more than mitigate the sufferings of those unfortunates who are cursed with this loathsome disease, I shall feel fully repaid for my labor.

Louisville, Ky.

LA GRIPPE.*

BY B. B. GODFREY, M. D.

Without giving the history of this disease, I will begin this paper by asserting that I believe la grippe should be classed with zymotic diseases.

Having this epidemic among us, how shall we diagnose it and how treat it.

Probably as safe and scientific a procedure in diagnosing this disease, until the microscopist shall have been successful in discovering the microbe and isolating its ptomaine or poison, is by elimination. Exclude bronchitis, asthma, and malaria, and, with the patient complaining of headache, a sense of constriction in the thoracic muscles, labored breathing, dizziness, loss of appetite, and almost invariably constipation, with more or less prostration, and the characteristic "pain all over," and you are reasonably sure of a case of la grippe. I have seen some cases where the patient seemed suffering as from shock; later, very high temperature with

*Read before the Michigan State Medical Society, June 11th, 1891.

profuse sweating. In some, the heart fails to do its duty, and in a number of cases with hyperpyrexia the patients have become delirious, later more or less bronchial trouble, with, now and then, a case complicated with pneumonia.

It has been said that this disease indiscriminately manifests itself among the strong and well, the weak and the diseased. This, my experience tells me, is not true. I have yet to see the first case where the patient was, prior to his attack, in a condition approaching that of normal; he may, to casual appearance, be well, but a few questions will convince one that the system was not in equilibrium, that the balance was overburdened on one side with some systemic product not appropriated or eliminated, leaving the subject in a proper condition for some zymotic disease.

With these conditions, what are the indications?

Ostensibly to restore the patient to a normal condition; but how? It has been my practice almost invariably to give calomel, or its nephew, gray powder, with an alkali, and get a free movement of the bowels and stimulate the kidneys and other glands of the system. This I do believing the mercury not only does this but acts as a germicide. For pain I give acetanilid or antikamnia, and while subduing that, at the same time and by the same means, reduce the temperature if necessary. In one instance I found it necessary to place my patient on ice (the temperature remaining for three days above 105° F., with constant delirium). This I did by putting pounded ice on a blanket, folding it, and then placing the patient on this bed of ice extending the whole length of the spine. All other means at my hands had failed to tranquilize the patient or reduce the temperature, but in six hours my patient was in a fair way to recovery, and in a few days was up, but very weak. In those cases of nervous manifestations, and we get many of them, I have found the bromides of little utility, some preparation of morphine answering the purpose better. In case of heart failure, digitalis, as a heart stimulant, with carbonate or muriate of ammonia for the almost always attendant bronchial symptoms, are indicated. Quinine has been lauded by some, but in my hands has not been beneficial, except when this disease has been complicated with malaria, which, in some localities, is frequently the case. On the other hand, I am quite sure I have seen some serious results from over-dosing with this drug, cembined with whisky, which, last year in particular, was a popular remedy with the laity. Many of my patients, while convalescing, were greatly benefited by emulsion of cod liver oil, though generally some simple tonic would be all that seemed necessary, with hygienic surroundings and a liberal diet of nutritious food.

Hudsonville, Mich.

HOW I HAVE CHOLERA MORBUS.

BY J. A. BRAINERD, M.D.

Once upon a time—in the night time—I had a tussle with cholera morbus. I am quite a hand to experiment, and am always hankering after experience. In order to profit by one's experiments, he should be methodical and make careful preparations; but I must plead guilty to being a little derelict in this matter on this occasion. I made no preparation, nor did I proceed with method.

About midnight the idea struck me, not with much favor at first; but I soon gave "inward" consent to take one lesson. I felt quite "unsettled" at first, and turned over, and curled up, and straightened out, because I felt like it, and scratched my head because it itched. Then I would have a twinge of cramps in my bowels and stomach, and then cramps in legs and recti abdominis, and then I would repeat. After about the third or fourth round, I introduced another feature—that of stooling. The first motion was semi-solid and copious. The next round introduced another feature, which completely demoralized all the system that there had been about the business up to date. All at once I wanted to puke. And I puked. You bet I puked. Before I could get out of bed, and ten feet to the wash-bowl, the puking was well under way. My cheeks were distended like a chipmunk's in harvest time; and my mouth, in spite of the puckering action of the orbicularis oris, was stretched to parting, and there went forth a stream of fluid from my mouth like

water from a Holly system of waterworks. It shot out in front of me with great force. I made my mark that time on the floor. But I kept on puking, and so hard! Then the cramps took a hand in it. Then I lay down on the floor, and puked until I got through—that is, for that time. Then, shivering and groaning, I got back into bed, but I did not care a cent if I did puke upon the floor. This state of affairs—the resting in bed, I mean, not the abandon—did not continue long. But I declare to gracious, I don't know just how the next bout did begin. There was purging and puking, and puking and purging.

After about two hours of this performance, and after I had filled a three-gallon slop-jar with ejecta and dejecta, and my hands were wrinkled, I thought I had had enough experience of that sort. I then took one-quarter grain of morphine hypodermatically, puked once more, and then went off into the arms of Morpheus. That one dose ended it. One day in bed restored me to moderate health.

In this desultory experience I learned anew a few things: First, that a small cause will sometimes start cholera morbus. I could refer my attack to nothing more than eating a half-dozen peaches in the twenty-four hours preceding, and drinking, perhaps, two ounces of ice-water. Second, that patients puke without much nausea, but with much force. Third, that the pain is chiefly in the abdominal walls, and not in the intestine; what there was in my case was mostly in the colon. Fourth, that the matters purged run away without effort. Fifth, that morphine is a bonanza in cholera morbus. Of course I knew all this before; but it was not a matter of experience with me, and I had not so vivid a realization of it. The itching scalp was a new feature, and I claim to be the discoverer of this. This will be distinction enough for one man.

ALMA, Mich.

CEREBRAL HÆMORRHAGE.*

Dr. Mendel: When we examine a large number of patients affected with cerebral apoplexy, we can but be surprised at the uniformity of the symptoms. This uniformity can only be explained by the fact that the hæmorrhage has the same anatomical seat. We have here a fact that was known to Morgagni, that cerebral hæmorrhage generally takes place in the substance of the corpus striatum and optic thalamus. From Charcot's statistics, we note that out of 386 cases, in 301 the seat of the hæmorrhage was as above stated; the rupture then takes place in one of the branches of the artery of the corpus striatum.

Why does the rupture almost always occur at this point? We know that in order that there may be rupture of an artery, there must be two factors: 1. An antecedent lesion of the arterial wall: 2. The arterial tension must be suddenly augmented.

The experiments of Wurm-Müller, show that a normal arterial wall cannot rupture; the lesion which causes this rupture is that to which Cruveilher called attention, and Virchow described with such care in 1851: it is the ampullary dilatation consecutive to atrophy of the muscular tunic. Charcot and Bouchard described later, in 1868, similar lesions under the name of *miliary aneurysms consecutive to diffuse peri-arteritis.* These aneurysms exist in all cases of cerebral hæmorrhage, and have their favorite location in the arteries of the corpus striatum and optic thalamus. The localization of the cerebral hæmorrhage rests, then, on the knowledge that the arteries in question present a great number of miliary aneurysms; but why the predisposition of these arteries to miliary aneurysms? This is a question that is not yet solved, and it is in order to attempt a reply that I have undertaken some new researches.

The solution should evidently be sought in the anatomical relations of these arteries. This led me to study anew their ramifications. The arteries which are distributed to the medullary substance, and to the central ganglia, are terminal, which, as Heubner has already shown, do not anastomose with the neighboring arteries. As for the vessels of the cortical substance, opinions differ. Some say these arteries are also terminal, others as Heubner, that they have anastomoses between themselves. My re-

* A discussion before the Medical Society of Berlin, May 27th, 1891. Translated for the AGE, by Dr. E. P. Hurd.

searches have shown that the arteries of the cortex present numerous anastomoses.

We come now to the question: What influence may these different conditions have on the blood pressure? None of the authorities give any answer. This is what led me to undertake some new rerearches with the little apparatus which I now show. This little rubber ball represents the heart; the different elastic tubes of variable character connected with it are designed to imitate, as far as possible, in their dimensions, calibre, anastomoses, the state of the cerebral vascularization. The pressure is measured by a manometer. In proportion as we raise the pressure, the arterial tension is the same in the carotid and in the corpora striata; it is not the same in the system of anastomotic arteries of the cortex. If for instance, the tension measures 30 millimeters in the carotid, it is 16, 17, or 23 in the arteries of the cortex. The result is, if the cardiac impulse increases arterial tension, it is much greater in the arteries of the corpus striatum than in the arteries of the cortex; consequently if the arterial walls present pathological alterations, the arteries of the corpus striatum give way the most readily in presence of a sudden elevation of the blood pressure. If such ruptures take place but rarely in the pons, where nevertheless the arteries are terminal and come from the vertebral; this is explained by anatomical reasons. The vertebral artery and the basilar artery present a flexuous course, and any augmentation of blood pressure causes these flexuosities to disappear, and prevents any sudden variation in tension.

But my experimental researches do not yet explain why the arteries of the corpus striatum and optic thalamus are the seat of miliary aneurysms. Here we must appeal to the experiments of E. H. Weber, who has shown that in elastic tubes the sudden augmentation of pressure of the liquid which traverses, not only dilates, but also elongates them. We must then admit the augmentation of pressure in the arterial system produces the elongation of the artery of the corpus striatum, and causes little lateral dilatations. Little by little, if these variations of pressure are repeated, the muscular tunic atrophies, the dilatations remain permanent, and the slightest exaggeration of pressure causes the vessels to give way.

A certain number of hæmorrhages are not produced by active pressure, but by venous stasis. The artery of the corpus striatum has difficulty in throwing its blood column through the very narrow veins which empty into the vena Galeni, while the cortical system of veins, which empty into the sinuses, is very large.

How, after what has been said, shall we explain the principal phenomena following an apoplectic attack? We know that no other organ of the body supports so poorly as the brain the least variation in its blood-contents. When there is an extravasation of blood in one point, the surrounding parts become the seat of a correlative anæmia; and this, in cases of cerebral hæmorrhage, will be the cortical region. Thus is explained the loss of consciousness, the vomitings, and the convulsions.

From these considerations we may deduce certain therapeutic applications.

Formerly one had recourse immediately to bleeding, in every case of apoplexy. To-day we only practice it in dangerous cases when the blood-pressure has attained an exaggerated intensity; bleeding is replaced by the ice-cap. I will not pretend this practice is injurious, but it is certainly irrational. On the one hand, it is impossible the action of cold can penetrate the interior of the cranium to the source of the hæmorrhage; on the other if it exercises its influence on the cortex, it determines a contraction of those vessels which can best drive the blood towards the central parts, and still more increases the blood-pressure there then. The only rational treatment is absolute repose of the body, with the head raised.

Dr. Senator: I am astonished that Dr. Mendel should feel the need of all this apparatus to demonstrate the physical laws which regulate the pressure of liquids in tubes which inter-communicate or are terminal. These laws are stated in all treatises of hæmo-dynamics.

Dr. Mendel has passed over in silence an important fact in the pathogeny of apoplexy, namely, *arterio-sclerosis*, on which Traube and Thomas have much insisted.

In what concerns the treatment, I cannot

consider as irrational the employment of the ice-cap, for we do not yet know how the cold acts. Perhaps it is by reflex action, causing contraction of the vessels. The sedative action of the ice-cap can not be denied.

Dr. Virchow.—When the arteries receive an exaggerated sanguineous impulse, two sorts of processes may be developed in their walls: 1. A simple proliferation of the constituent elements, so that the walls thicken at the same time that the vessel is dilated: 2. An inflammation of the internal tunic followed by sclerosis.

These two processes may be combined; but their application to the pathogeny of cerebral apoplexy is not as simple as one might think. In cases of collateral anastomoses, we find serpentine dilatations on the level of the inflections which receive the principal part of the blood-shock; now, in cerebral apoplexy, this serpentine form is rare, and we find often but a single little saccular aneurysm. This dilatation of one vessel is with difficulty explained by the general conditions of blood pressure. On the other hand, we sometimes find on the surfaces of the brain, in the pia mater, an apopletic extravasation, and we there note also a single little aneurysm. To this we must add that cerebral hæmorrhage is generally unilateral, while the blood pressure exercises its action in all directions.

The explanation furnished by Dr. Mendel is satisfactory to a certain point as a general formula, but is not sufficient to enlighten us on this particular point:—Why the hæmorrhage takes place in determined points? Researches are rendered very difficult by the local destructions effected by the blood extravasated into the cerebral tissue. But let us console ourselves by the fact that we are not further advanced in what concerns dangerous effusions in other organs, such as the spleen and kidneys.

Dr. Mendel said that he had not intentionally neglected to speak of arterio-sclerosis, which he thought had little to do directly with the causation of apoplexy; Virchow had shown this in 1856, and it was also the opinion of Charcot.

"I do not," he said, "dispute the sedative action of the ice-cap, but I intended to speak only of the immediate treatment after the attack, when the patient has not recovered consciousness, and consequently does not suffer from headaches. In the stage of reaction, the ice-cap is undoubtedly beneficial."

Correspondence.

AUSTRALIAN LETTER.

Treatment of Spider-Bite—Australian Food Habits—Opium Production and Addiction.

In the Australasian Medical Gazette for last month, Dr. Andrew Ross, M. L. A., of Molong, N. S. W., gives particulars of a remarkable case of spider-bite, and prominence is also given in an editorial to this matter.

The spider is described as a large black one, with a large round belly, and a red spot on the back. A large erythematous circle was found at the spot where the spider bit. The boy was in the most excruciating pains, completely lost the use of his limbs, and no position seemed to afford him the slightest relief. Dr. Ross administered strong doses of ammonia at short intervals, and then, as this gave little relief, teaspoonful doses of strong brandy at equally short intervals. Emetics were also given, but he remained in this state for two days, with but very slight improvement; on the third and fourth days he improved, and on the fifth all but recovered.

It appears that of the genus Latrodectus, to which the spider belongs, there are two Australian species, the Scelio and the Hasseltii—the Scelio is found in New Zealand. The whole of this genus has venomous qualities, and deaths have been reported from their poison. Dr. Mueller's treatment for snake-bite, in reduced doses, is given as the most suitable remedy.

Dr. Mueller's treatment is as follows: (*a*) A solution of nitrate of strychnine of 1 in 240 of water with a little glycerin: (*b*) Twenty minims of this to be injected in the usual manner of an hypodermatic injection: (*c*) The frequency of repetition depends on the symptoms being more or less threatening, say from 10 to 20 minutes. When all have disappeared, and the strychnine shows its first independent action by slight muscular spasms, the injections may be discontinued. Both poisons are thoroughly antagonistic, and no hesitation need be felt in pushing the use of the drug to quantities that would be fatal in the absence of snake or spider poison: (*d*) Any part of the body will, of course, do for the injections, though the neighborhood of the bitten part, or on it, is preferable.

Specimens have been forwarded to Professor Kobert, of the Dorpat University, but were inert when he received them. This raises the question if the poison may be destroyed by time or decomposition, or if it may be volatile. It is mentioned that Professor Anderson Stuart has found that quick-

ly killed spiders are not very venomous, which points to the fact that the poison may be created by irritation, or it may only be possessed of it at a certain season of the year, or at one stage of existence.

This subject is not by any means altogether new. Last year Mr. Chas. French, F. L. S., the Victorian Government Entomologist, read a paper before the Field Naturalists' Society of Victoria, giving particulars of the effects of several instances of the bite of these spiders, and previously to this Dr. T. S. Ralph contributed a paper to the same Society on the poisonous "Katipo." This genus is represented in the United States by *L. verecundus* of California, and *L. mactaus* of Georgia and North Carolina, so that perhaps some of your scientists can throw further light on this matter.

Dr. P. Muskett, who is already known as the author of two or three works, has contributed a valuable article to the press on "Australian Food Habits."

He mentions it as very curious that so little attention has been given to the influences which the daily food and habitual dietary exercise upon the present and effect the future population. It is evident that the natural dietary of the earth's inhabitants is controlled largely by the particular region in which they dwell, but in Australia no attention is paid to this, for there can be no doubt that our dietary customs are not in harmony with our climatic conditions. Dr. Muskett points out in what directions amendment should be made.

A meeting, which has been termed an Opium Conference, was held last month in the Sydney Centenary Hall. At the close of the meeting a motion was carried—"That the sale of opium should be prohibited, except for medicinal purposes,"—apparently no one present being aware that the sale was already prohibited by our "Sale of Poisons Act." A small colony of poppy farmers from India have settled near Roeborne, in Western Australia, with the intention of raising the poppy for the seed for sowing in India. Some Indians came over a year or two ago to engage in pearling, and started growing vegetables and, as an experiment, poppies. The seed they sent to India was so good that it found a ready sale, and this has lead to this party coming with a view to ultimate opium production for the large numbers of Chinese in Australia. It appears that our Western neighbor is particularly well adapted for poppy culture. Many more may be expected to follow if these are successful. The Government is considering whether to permit any further immigration. H. L. T.

The Medical Age.

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Editorial.

AN INTERESTING MEDICO-LEGAL CASE.

A murder case recently tried in New York, involved the determination of the identity of blood and fæcal stains, and the differentiation of the elements of fæces from the contents of the ileum.

This case has excited much attention inasmuch as it was claimed by the prosecution to be a murder accomplished by what has been termed "Jack the Ripper" method, and the prisoner being considered by some the original Jack the Ripper, who undetected, was assumed to have committed the mutilations sensationally reported by the English press only a short time ago.

The prisoner was indicted under the name of George Frank, alias "Frenchy," tho' there was evidence to the effect that he was an Algerian, and his real name Ameer Ben Ali. The facts regarding this murder have been so widely published by the newspaper press that they need not be detailed here.

The verdict reached was murder in the second degree.

The evidence of the experts who testified for the prosecution, and these experts were Drs. Cyrus Edson, Austin Flint, and Henry F. Formad, was unanimous as to the results of the microscopic examination.

The conclusions reached by these experts were as follows:

1. That the specimens examined contained tyrosin, bilirubin, columnar epithelium, partially digested muscular tissue and vegetable substances, micro-organisms, etc.
2. That the tyrosin and bilirubin must have come from the small intestine, while the other substances might exist in the large intestine.
3. That the tyrosin was due to the pro-

longed action of the pancreatic juice upon albuminoids, these matters being first converted into trypsin-peptones and afterward into tyrosin, the change into tyrosin being aided by the action of intestinal micro-organisms.

4. That the bilirubin, which strongly colored the epithelial cells and the molecular matters, was characteristic of the contents of the small intestine.

5. That the appearances were practically the same in all the specimens.

As opposed to these facts the theory of the defense was that the woman was killed by the man who went with her to her room the night of the murder and disappeared during the night; that it could not be shown that the stains on the prisoner's person and clothing were blood mixed with the contents of the small intestine; that the substances claimed to be present in the ileum were also present in the fæces—and that the blood on the prisoner's shirt was from a woman with whom the prisoner had had connection, the night before the murder, during her menstrual period.

Judging from the verdict, the jury believed that the blood was mixed with the contents of the small intestine and not with fæces, and that the matters found on the prisoner's person and clothing were identical with those found on the ticking of the bed on which the murdered woman lay.

In further evidence of the conclusions of the experts for the prosecution, the subsequent record of the autopsy showed that a portion of the lower part of the ileum had been cut, the large intestine being uninjured. This was strong substantiation of the accuracy of the results of microscopic examination. Notwithstanding this evidence, however, the jury rendered the verdict of murder in the second degree.

This verdict would seem to indicate doubt of the value of the expert testimony adduced by the prosecution, and if we are to credit the statements of some of our New York medical contemporaries, it would have been hazardous to convict the prisoner on the microscopically established identity of minute collections of blood and intestinal matter.

While the compromise verdict rendered seems to have given general satisfaction, if we may judge by newspaper comments, it really ignored the expert testimony presented, and was to our mind an unjust and sad commentary on the prevalent opinion of expert testimony which should most of all be the determining factor in deciding criminal cases when the other evidence is circumstantial only.

It is time that our courts and juries recognize that such testimony is not theory merely, but is based on scientific fact.

Not until this state of opinion is brought about can the criminal laws be properly executed, and the public protected from such monsters as the prisoner in this case for whom imprisonment is utterly inadequate punishment.

IS SYPHILIS ABORTED OR ATTENUATED BY THE EXCISION OR DESTRUCTION OF ITS INITIAL LESION?

It was not many years ago when this question would have been answered in the affirmative by the majority of the profession. The practice of excision was a decade ago all but universal.

There have always been some surgeons, however, who have doubted the utility of excision of the initial lesion, either in aborting or attenuating the secondary symptoms.

At the present time the preponderance of opinion is decidedly in favor of the futility of excision.

Some interesting contributions to the subject have recently been published—"The Results of Syphilitic Chancre," by Dr. L. Jullien, of Paris (L'Union Medical, March 5th, 1891); "Excision of the Chancre as an Abortive Treatment of Syphilis," by H. Leloir (Wiener Mediz. Presse, April, 1891); and "Why Syphilis is not Aborted by the Early Destruction of, or Excision of, its Initial Lesion," by R. W. Taylor (New York Medical Record, July 4th).

Jullien still adheres to the theory that the excision of the initial sclerosis is not always a useless operation, and that it is legitimate to propose it when the chancre has existed only a few days, and when the ganglia are free from all specific influence. He insists that with the sore a large zone around its circumference should be removed, and that even if the loss of substance be great, it never causes the patient as much anxiety as

does the smallest chancre in the course of development. Cases which are not suited to the operation are those in which, owing to the seat of the lesion, there would result a deformity or an embarrassment of function.

He believes that the doctrine, according to which, the chancre having been recognized, the physician has only to fold his arms and await the course of infection and the general contamination of the system, has had its day, and that, the disease once established, treatment ought to be adopted to prevent or to combat it at least; that excision is the most complete means which we have at hand, and is adapted to a very small number of well-chosen cases early met with.

H. Leloir's opinion, after excising many chancres and seeing many others excised, is that in most instances secondary syphilis follows the operation just the same as when this procedure is not taken. Leloir, notwithstanding this belief, states that the operations of Auspitz, Unna, Langenbeck, Rydygier, Kölliker, Pick, Pospelow, Spillman, and De Amicis go to show that it is perhaps possible occasionally in the early stage to entirely remove a primary syphiloma.

Dr. R. W. Taylor, in his paper read before the New York Academy of Medicine, reviews the testimony of eminent authorities, and cites in favor of the inutility of excision the views of Berkeley Hill, Ricord, Rasori, Giber, and Mauriac. He presents also, in further evidence of the opinions of these writers, his own experience and convictions, confirmed especially by two test cases in which the conditions were most favorable for determining this vexed question, and in which, after the most thorough excision, the secondary symptoms were classically developed. Dr. Taylor accompanies his article with a colored plate illustrating the early successive stages of syphilitic infection, based on the microscopic examination by Dr. Van Giessin of Dr. Taylor's specimen of excised chancre.

The conclusions from Dr. Taylor's studies are that in the very first days of syphilitic infection, as shown by the chancre after the first period of incubation, the poison is deeply rooted beneath the initial lesion, and that it extends far beyond it; that it is in a most active state and, running along the course of the vessels, it soon infects all the parts beyond, even to the root of the penis. These studies seem to warrant the conclusion that the virus is not localized to its point of entry and that it does not shut itself in by throwing out a dense wall of circumvallation, which later on disappears and allows of the exudation of the morbid products of the heretofore supposed closed-in morbid focus. Clinical and pathological facts go to show that the infective process occurs very rapidly. That it is, therefore, utterly futile to rely on excision as a prophylactic measure after the chancre has appeared. The poison seems to strike at once for the smaller vessels, chiefly the veins, and to run along them with great rapidity, and with exuberant growth. Therefore, contrary to the ideas hitherto held, it is certain that in the first period of incubation the infection is going on rapidly and actively by diffusion, instead of, as we formerly supposed, smouldering in a cold and aphlegmasic manner in a sharply limited space.

Dr. Taylor is not prepared to state definitely, as a result of the facts demonstrated in these cases, that anti-syphilitic treatment should be instituted just as soon as the chancre is discovered.

It would seem to us that the evidence adduced is strongly in favor of instituting anti-syphilitic treatment as soon as the lesion is positively determined to be chancre. The difficulty is, in many cases, to differentiate the chancre and chancroid. This being settled, why postpone treatment till the secondary symptoms are developed? Such delay can only be consistently made when the diagnosis between chancre and chancroid is in question.

GYNÆCOLOGICAL FADS AND FASHIONS.

The London Lancet points out the necessity of observing patiently, experimenting cautiously, and generalizing slowly, when investigating new methods of treatment.

As an illustration of the modern tendency to forming definite conclusions from insufficient premises and the prevalence of purely empirical practice, gynæcology is cited.

Gynæcology has unfortunately ever been the fertile field of fads and fashions, and sometimes even the battleground of antago-

nistic methods of treatment. We need scarcely refer to many of the fashionable procedures which, for a time, held sway in gynæcological practice. The history of the slitting up of the cervix uteri, which was for many years considered an essential operation in all cases of sterility, is well known. Then followed the sewing-up operation, which became the rage amongst a class of practitioners. Both of these have, however, declined in favor, and are performed but seldom by scientific gynæcologists. Nor need we direct attention to the discussion going on in certain quarters as to the removal of the uterine appendages, the use of electrolysis in uterine fibro-myomata, or to the emulation manifested in several societies devoted to diseases of women in devising varieties of pessaries and other gynæcological instruments which are considered so necessary by some practitioners and discarded with equal vehemence by others.

Among the latest gynæcological fads is masso-therapeutics, which has been resorted to and claimed to be efficient in amenorrhœa, dysmenorrhœa, sterility, prolapsus uteri, subinvolution, chronic peri- and para-metritis, uterine displacements, pelvic adhesions, and in hysteria.

While the value of massage properly applied must be conceded, the art of its therapeutic application is still in its infancy, and the difficulty of its general application in medical practice, on a scientific basis, is so great, that it is not likely to grow in popularity or find a permanent place in the gynæcologist's *armamentarium*.

TREATMENT OF HAY-FEVER.

Whatever may be the theory of the causation of hay-fever, the question to physician and patient is: How shall the symptoms be relieved? Mere mention of the remedies that have been tried would almost make a treatise on materia medica.

Among these are a few which have proven their efficacy. These may be briefly described under two heads, viz., remedies for local use, and for internal administration.

Local medication may include cocaine in 4-per-cent. solution, in tablet form, or in nasal bougies. A good formula for nasal bougies is the following:

℞ Hydrochlorate of cocaine, 1 grain.
Atropine, $\frac{1}{100}$ grain.
Cacao butter, q. s.

The bougie may be held in position by a pledget of absorbent cotton soaked in cocaine solution.

Menthol may also be used with advantage in 10- to 20-per-cent. solution in olive or almond oil and applied to the nasal membrane with a brush, or in spray or simply insufflated.

Fluid extract witch hazel, distilled, and fluid hydrastis, for local application, are often of value in the catarrhal symptoms.

Peroxide of hydrogen, by inhalation, has been commended by many competent observers who regard the specific germ theory of causation most credible.

For internal administration, to abort the paroxysms, grindelia robusta, euphorbia pilulifera and quebracho may be resorted to either alone or in combination.

These remedies have shown their specific antispasmodic action in asthma, and accepting the neurotic origin of hay-fever, must be conceded to be of service in restoring normal respiratory action in the distressing paroxysms of hay fever.

It is, perhaps, needless to add that there are no absolute "*cures*" for "hay-fever," except removal outside of the areas where the malady obtains; that is to say, apparent cure in one year is no evidence of non-recurrence the year following; that the remedy that was efficacious one season, may prove wholly inert the next; or that which relieves one individual to-day is totally inadequate to the needs of another to-morrow.

Such patients should follow the approved rules of hygiene; avoid as far as possible conditions that aggravate, notably mental weariness and worry—which are more potent factors, by far, than commonly supposed—and attend strictly to the maintainance of general health, strengthening as far as possible—by tonics and other means—the weak and irritable constitution.

Notes and News.

Improvements in the Coroner System.—

Dr. H. O. Marcy, who has recently reviewed the existing coroner laws of the United States, has reached the conclusion that the following changes and reforms are needed:

First. To abolish the office of coroner.

Second. To dispense with jury service.

Third. To separate the medical from the legal duties in all cases involving the examination into the causes of death where crime is suspected.

Fourth. To entrust the medical examination only to competent medical officers properly trained in their work.

Fifth. To make the number of these medical officers as small as consistent with the proper discharge of their duties.

Sixth. To consign all questions of law only to properly qualified legal magistrates.

Seventh. To remove the appointment of these officers entirely from the question of political consideration, and to be based only upon their possession of the requisite and proper qualifications.

Massachusetts alone has already carried out successfully most of these suggestions.—*Medical Record.*

Spreading Disease by the Clinical Thermometer.

L. M. Powers, M.D., in the Medical Record, warns physicians of the danger of using the thermometer when unclean. He says:

I have seen the thermometer used when the amount of mucous accumulated on it was so great as to make it almost difficult to see the register. The majority of practitioners wipe the instrument off with a handkerchief, towel, or even the bedclothing, and carefully place it away in a case prepared with a small amount of absorbent cotton in the bottom to prevent breaking, and, unintentionally, to preserve the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon.

I make it a rule to clean my thermometer every time it is used, whether I suspect any infectious disease or not, at the patient's residence. I use soap and water, and if no disinfectant is at hand, I use, on my arrival at my office, either boracic, carbolic, or corrosive sublimate solution, in order that I may use my thermometer with a clear conscience when it is again needed.

The Contagiousness of Influenza.—

In a paper read before the Epidemiological Society on the 20th ult., Dr. Richard Sisley contended that the current opinion as to the spread of influenza being mostly too rapid and sudden to be accounted for by contagia, a view so ably propounded by the late Sir Thomas Watson, requires reconsideration. He points to features in the spread of the recent epidemics in confirmation of the much older doctrine of its contagiousness, which, indeed, several of the records of various visitations support, and he concludes with the following propositions: 1. There is no doubt that the disease is contagious. 2. Isolated cases precede a general infection of the community. 3. The part played by contagion in the spread of the disease is most important. 4. There is some evidence in favor of the spread of influenza by goods. 5. Influenza is not spread in England by a preliminary "contamination of the atmosphere," but the atmosphere is contaminated by individuals who suffer from influenza.

The Prevention of Rust on Surgical Needles.—

Dr. Dawbarn, in a recent number of the New York Medical Journal, points out that dry sterilizing of needles at the usual temperature is apt to injure their temper and cause subsequent bending during use; that boiling or steaming induces flecks of rust, while glycerin has failed. He suggests keeping the needles in alcohol, the procedure being as follows: The needles are immersed in benzin to remove grease, then after running them through a towel, the points are plunged into a piece of cork the size of a pea —to avoid dulling from jolting—and finally, with their corks, are placed in a wide-mouthed, glass-stoppered bottle filled with absolute alcohol. After using the needles pass them through a thick, wet, soapy towel repeatedly, cleanse the eye with a thread, immerse in benzin, and finally replace in the alcohol. The latter substance is an efficient disinfectant, besides being an excellent protector against rust.

A Brazilian Botanical Exhibit at the World's Fair.—

Captain Alexander Rogers, the special World's Fair Commissioner to Brazil, reports that the botanical exhibit from that country will be the finest ever made. The director of the botanical garden at Rio de Janeiro, Dr. J. Barboza Rodriguez, probably the leading scientist in that republic, is taking a great interest in the work of preparing a fine display for Chicago. He will send the fullest possible collection of plants, and make a full exhibit of orchids and palms, on both of which he is a high authority, having himself discovered over five hundred new varieties of orchids and fifty new varieties of palms. He will send also his private ethnological collection of over a hundred pieces, the most valuable and the rarest that he found during his stay in the Amazon country.

The Magnetic Needle as a Diagnostic Auxiliary in Surgery.—

To the number of cases already published, in which the magnetic needle was employed as a diagnostic auxiliary in surgery, a new series is contributed by the surgical clinic at Bern. In the majority of all these cases, it was desired to determine the presence of needles or small pieces of metal, partly with the electro-magnet, partly with the ordinary horse-shoe magnet. The method is simple and uniformly satisfactory in results. If in future warfare, projectiles provided with steel-shells should come into general use, the means of diagnosis, referred to, will surely command further and more extended application.—Dr. Willy Sachs, in *D. Med. Wochenschrift.*

A Ready Way of Demonstrating the Presence of Arsenic in Wall-Paper.—

Put a small piece of the paper into strong ammonia water. If arsenic be present, a blueish color will be developed. Since copper gives a similar reaction, as a further test moisten a crystal of nitrate of silver with a drop of the fluid. If the color be due to arsenic, a yellowish deposit will be formed on the crystal.

A Tribute to the Value of Boards of Health.—

In the Journal of the American Medical Association of June 13th, Henry Bixby Hemenway, A. M., M. D., says: "Among the various State Boards of Health, perhaps none have done more to raise the standard of the medical profession, and to defend the public against impostors, than that of Illinois. None has probably done more for the science of medicine than that of Michigan."

Dr. Frank Lydston.—

Dr. Lydston has been elected to the Chair of Genito-Urinary and Venereal Diseases at the Chicago College of Physicians and Surgeons. Dr. Lydston's contributions to the literature of this special branch of study, have made him so well known that the College and its classes are to be congratulated on the appointment made.

Dr. Daniel G. Brinton.—

Dr. Brinton, so long known for his surgical work, and his former connection with the Philadelphia Medical and Surgical Reporter, has received the degree of LL.D. from the Jefferson Medical College in recognition of his researches in anthropology and ethnology.

Sued by Sir Morell Mackenzie.—

Sir Morell Mackenzie, the celebrated throat specialist of London, has brought suit for $10.000 damages, for the alleged unauthorized use of his name, against the Soden Mineral Springs Company and the Eisner & Mendelson Company. An injunction has been asked for.

Dr. F. E. Stewart.—

Dr. Stewart, whose contributions to medical and pharmaceutical literature are well known, has been appointed Demonstrator of Pharmacy and Materia Medica at Jefferson Medical College.

The Will of Dr. Fordyce Barker.—

By the will of the late Dr. Fordyce Barker, the New York Academy of Medicine is to receive all the works in his library relating to obstetrics, gynæcology, and the diseases of children.

Harvard Medical School Fellowships.—

Three scholarships of $5,000 each have been established through the gift of William S. Bullard.

Therapeutic Brevities.

Irrigation of the Stomach of Small Children for Therapeutic Purposes.—Irrigation of the stomach is a valuable agent for the treatment of beginning disorders of the stomach and intestines, if used at the proper time. It may prevent their transformation into severe or dangerous conditions. The favorable results to be obtained are the more evident the earlier in the history of the disease this treatment is undertaken.

The most favorable cases for cure by this means of treatment alone, are the dyspepsias which are unattended by fever; the gastric form will yield most readily, the mixed gastric and intestinal form less readily, and the intestinal form least readily. The chronic forms of dyspepsia yield to this treatment less readily than the acute, and the different varieties yield in the same order as mentioned for the acute forms.

Irrigation is also useful for the quickly-developing disorders of the stomach and bowels, for example, the specific form of diarrhœa; but it should be used in conjunction with other means.

The subacute and chronic disorders of the stomach and bowels may gradually be overcome if, with the irrigation of the stomach and the internal medication, careful efforts are observed to strengthen the system at large.—Troitzky in the *Arch. f. Kinderh.*, Bd. xii, 5, 6.

An Effervescing Powder as a Hypnotic.—The Archivio Italiano per le Malattie Nevose, gives an account of some observations made in the lunatic asylum of Ferrara on the effects of the effervescing mixture of sodium bicarbonate and tartaric acid. One hundred observations were made on forty patients suffering from insomnia due to various morbid conditions. It was found that the mixture, exhibited in the evening, produced a decided hypnotic effect. Half of the patients, however restless and however unfavorably situated for sleep, slept within half an hour of administration, most of the remainder within an hour, few at a later period. The sleep produced was calm and not profound, natural, and lasting from five to eight hours. The usual dose was six grains of the mixed powders, exceptionally increased as far as twelve. Young people were found to be more susceptible to the influence of the remedy than adults or the old. The effect is attributed to the absorption of carbonic acid and its well-known anæsthetic action.

Oil of Wintergreen in Rheumatism.—Oil of wintergreen has been used for some time in capsules, in doses of from five to ten drops, in severe forms of rheumatic inflammation, with marked success. As an external application in swollen and painful joints, either acute or chronic, the oil has for a long time formed a part of many liniments, but the combination most successful has been equal parts of sweet oil and wintergreen, applied liberally to the parts, which are then kept carefully covered. Propylamin, which the Russians extract from the brine of the herring, and use extensively in the rheumatic conditions so common in that climate, is also obtained from the wintergreen as well as other aromatic vegetable products, and to this, perhaps, is due the beneficial action of the oil.—*New York Medical Times.*

A Lotion for the Alopecia following Acute Diseases.—The following formula is given (L'Union Médicale, April 23d, 1891) as a preventative of the alopecia which is observed during convalescence from grave acute diseases:

℞ Alcohol, 80 per cent., 2½ ounces.
Camphorated alcohol, 1¼ drachms.
Rum, 1½ drachms.
Tincture of cantharides, 1¼ drachms.
Glycerin, 1¼ drachms.
Essences of sandalwood, wintergreen and roses, ää 5 drops.
Muriate of pilocarpine, 7½ grains.

If the hair becomes dry, inunctions of oil sweet almonds or castor oil may be made from time to time.

Syzygium Jambolanum in Diabetes Mellitus.—Lamaschen tried this in eight cases. In each, after large enough doses—5 to 10 drachms of the powder in twenty-four hours—for several days, the urine and sugar decreased in quantity within a few days, the thirst and other diabetic symptoms lessened, and the improvement remained for a time after discontinuing the treatment. But the sugar did not completely disappear in any case. The jambul caused no disagreeable effects, and, in fact, the patients generally increased in strength. He thinks the contradictory records of other clinicians must arise from their use of too small doses, or of inferior specimens.—*Times and Reporter.*

Treatment of the Dyspepsia of Children with Lactic Acid.—Lesage (Revue de Thérapeutique Médico-Chirurgicale, April 1st, 1891) employs lactic acid in the treatment of

simple dyspepsia as well as that associated with "spinach" stools. His formula is:

℞ Lactic acid, 30 grains.
Simple syrup, 3½ drachms.
Water, 2¾ ounces.

If there is simply a dyspeptic condition without immediate danger, this mixture can be prescribed in doses of a coffee-spoonful five or six times a day; in graver cases it must be given more frequently. To prevent relapse, it is necessary to continue this treatment for several days after active symptoms have subsided.

Chafing of Trusses.—De Garmo recommends highly the following, not only for use with trusses, but wherever a toilet powder is used for children:

℞ Amyli, ʒ iv.
Cretæ gallicæ, ʒ ij.
Alum. ust.,
Acidi boracic. ää ʒ ij.
Acidi carbolici,
Ol. limonis, ää ʒ ss.
M. Sig.: Powder very fine.

Where an abrasion has once occurred and is slow to heal, on account of the constant wetting by the urine and the irritation of the truss, the author has found nothing better than the balsam of Peru.

Etherization in Croup.—Dr. Friedrich Betz reports in Memorabilien for April 18th, 1891, a case of croup in a child aged 13 months, who was apparently moribund when seen, in which recovery followed the inhalation, every 15 minutes, of 3 drops of a mixture of 1½ grains of menthol, 15 minims of acetic ether, and 45 minims of sulphuric ether. He says that in another similar case he would increase the quantity of menthol to about 5 grains—the amount of the mixture inhaled being increased proportionately to the age of the child.

Hypodermatic Injection of Creasote for Tuberculosis.—Josias (La Méd. Moderne) recommends the following formula:

Pure sterilized olive oil, 8 cub. cent.
Cocaine, dissolved in oleic acid, q. s. 1 centigramme.
Pure beech-wood creasote, 1. gramme.

This is all injected at one séance, in four places; repeated every two days for a month; and resumed, after a pause more or less prolonged.

Treatment of Vegetations on the Genitals.—Dr. Ciro Urriola, of Panama, states (Lyon Médical) that 1 part of salicylic acid dissolved in 15 parts of acetic acid, applied with a fine camel's-hair brush to vegetations of the genitalia, causes a rapid disappearance of the growths. Two applications are usually sufficient. The pain is said to be fugitive and insignificant, which is a great item in favor of the treatment.

Sea-salt for the Relief of Insect Stings.—Rubbing the parts with sea-salt, dampened with a little water, is efficacious in relieving the distress caused by stings from wasps, bees, and other less formidable insects. The pain and swelling quickly subside after such an application, and if the salt be applied at once these phenomena will usually not appear.

Hæmoptysis.—The following is recommended as useful in hæmoptysis when the loss of blood is slight but persistent:

℞ Turpentine,
Oil of sweet almonds, ää ʒ j.
Mucilage of acacia,
Simple syrup, ää ʒ iv.
Distilled water, ʒ v.
M. S.—One teaspoonful every half hour.

Saw Palmetto (Sabal Serrulata) in Impotency.—Dr. E. L. Styles writes to the Medical World that he has used this drug in fifteen or twenty cases of impotency and loss of power, caused either by over-indulgence in sexual intercourse or by masturbation, and it has not failed in any case to give prompt relief or a permanent cure.

Hot Solutions of Corrosive Sublimate.—It is asserted that the antiseptic effect of corrosive sublimate solutions is greatly increased by heating to a temperature of 100° F. and higher, a 1 to 10,000 solution at this temperature being equal in germicidal efficacy to a cold solution of 1 part to 500.

For Facial Erysipelas.—

℞ Tinct. benzoin comp., ʒ ij.
Collodion. flex, ʒ j.
Glycerin, ʒ j.
M. S.—For local use.

—*Am. Jour. Med. Sci.*

Medical Progress.

VARIATION IN ACONITE PREPARATIONS.—Dr. W. H. Walling writes the editor of the Medical World the following letter:

I read, with much interest, the article upon Aconite, in the May number, by Dr. Coleman.

This drug, in medicinal doses, acts (*a*) upon the circulation, rendering the pulse lower and softer; (*b*) upon the skin, rendering it moist; (*c*) upon the kidneys, increasing the flow of urine. This is the therapeutic effect, and is produced, in a majority of cases, by a minimum dose. My general method is to put five drops of a standard tincture of aconite into half a tumbler of water, and direct a teaspoonful of the mixture to be given every hour. The effect is through the nervous system. In addition to what Dr. Coleman stated regarding the physiological effect, I will say that this action is also through the nervous system, acting (*a*) upon the receiving centres in the brain; (*b*) upon the sensory tracts in the spinal cord; and (*c*) upon the sensory nerves of the skin, etc. Space will not allow of my enlarging upon these effects. The action produced in the cases of "Subscriber," to which Dr. Coleman refers, was due to his pushing the drug beyond the safe limits of its therapeutic effects. This was doubtless unintentional, as "Subscriber" may have been using a poor preparation in previous cases, requiring a large dose to produce therapeutic action, and, in the cases under consideration, he may have been supplied with a strong tincture, or fluid extract, and using the same dose as before, the results were surprising, to say the least; and this leads me to say that the remarks of Dr. Coleman regarding the uncertainty of the fluid extracts in the market are strictly true.

To illustrate this, I give the analysis of six samples of fluid extracts, purchased in open market, which showed the following variations in alkaloidal strength, by assay:

		Variability in Alkaloidal Strength.
6 samples fluid ext.	cinchona.....	1.30 to 2.50
" " " "	belladonna....	.18 to .58
" " " "	aconite.....	.30 to .64
" " " "	nux vomica...	1.00 to 2.60

This shows an alarming range, and calls loudly for the standardization of our *fluid extracts* and tinctures based upon alkaloidal or other active principles, whenever possible and practicable. In the case of the tincture of aconite it is possible, but in actual practice such assay is not practicable, the physiological test, introduced by Dr. Squibb, being the one generally adopted. This is made as follows: Prepare a tincture of aconite, by exhausting ten grains of the finely powdered drug with strong alcohol, according to the U. S. P. rule for making tinctures, until a yield of 100 c. c. is obtained; 10 c. c. of this tincture, representing 1 grain of the drug, is then diluted with water to 600 or 700 c. c., or until one fluidrachm of the mixture, placed in the anterior portion of the mouth, previvously rinsed with water, and held there for one minute, produces a slight tingling sensation, lasting from one-quarter to one-half hour, in accordance with the strength of the drug. The various fluid extracts of aconite in the market, and the tinctures of aconite as found in our retail stores, will vary so widely as to render them very untrustworthy. It has been demonstrated repeatedly, that the tincture as ordinarily found will give the extreme of from 1-500 to 1-1500 by the physiological test.

No wonder that the results are sometimes surprising, when repeated ten-drop doses of the 1-1500 tr. are followed by the same repeated amounts of the 1-500 tr. Not only surprising, but sometimes disastrous, are the consequences in such cases.

A still greater range is found in the physiological test for aconitine, which has the alarming variation of from 1-40,000 to 1-300,000.

Aconitine is a very delicate alkaloid, affected easily by heat, and requiring the most careful manipulation in order to preserve its activity. I have no doubt that the dosimetric granules, so ably advocated by Dr. Coleman, are most excellent, but they are very expensive, and those claiming superiority are of foreign production. Not that this should exclude them, but when we have a preparation of aconite of home production, of definite strength and reliability, and of slight cost, comparatively, I, for one, prefer its use.

I refer to the normal liquid, made by Parke, Davis & Co., of Detroit, Mich. This normal liquid, or assayed fluid preparation of aconite, is of such constant strength that, diluted with alcohol, according to the direction on each bottle, it forms a tincture which gives the physiological test with one to six hundred, which is the standard adopted by the pharmaceutical house mentioned.

I have long used this (aconite) and the other normal liquids, and always found them reliable and effective. I may add that the list embraces all of the important fluid extracts of the U. S. P., brought to a definite standard.

As a true American, I believe in using home products, when they are good, and would recommend to Dr. Coleman and others the use of these normal liquids as being "arms of precision" at a moderate cost.

The Doctor's article prompted these lines, and, if deemed best and desirable, I may take up, at some future time, the subject of the Galenical preparations of the U. S. P., and give the mode of preparation, strength, etc., etc., based upon a long experience, both pharmaceutically and clinically.

PALATABLE MEDICATION.*—In looking back to the time when the writer prescribed for his first patient, in 1861 (being then in the country), and recalling the forms of the remedies then used, and contrasting them with the elegant pharmaceutical preparations of the present time, the change seems wonderful, as indeed it is.

In those days the country practitioner carried in bulk his calomel and jalap, rhubarb and opium, tartar emetic and ipecac, Epsom salts and senna, together with such grades of cinchona-bark as he could get, and other drugs in like manner.

Many of them were very uncertain in their action, by reason of the changes which had taken place in their molecular arrangement, incident upon time, exposure, etc. Unpalatable, unsightly, disgusting, nauseous, might be written of nearly all the remedies used in the days "before the war," and upon which the regular practitioner had to depend, and against which his patients so frequently rebelled and turned to a school that offered pleasant remedies, whether effective or not.

This question of the palatability of medicine, and at the same time of its efficiency, is one that concerns the country as well as the city practitioner, as much or even more now than in the days just referred to, for in the attempt to present unpleasant remedies in palatable and attractive form, the active principles of the drug are too often sacrificed.

The comfort and well-being of our patients are, and should be, our first thoughts, and palatability in medication, combined with efficiency, takes first rank in these rapidly progressive days; and the practitioner who fails to recognize this fact, whether he be in city or country, will be left behind in the race.

A medicinal elixir, as commonly understood, is a preparation made pleasant to the sight, the smell, and the taste, by reason of certain proportions of medicaments, aromatics, spirits, sugar, coloring matter, and water all skillfully combined so as to present the virtues of each, and yet no one so pronounced as to be objectionable.

There are some two hundred and fifty formulas for elixirs extant, many, if not most of which are merely cordials, but their number attests to the popularity of such a form of medication.

I have long thought that the Pharmacopœia ought to recognize this class of preparations, but thus far only one formula has been given in it, and that for a simple elixir or Elixir Aurantii, made by dissolving oil of orange, by a certain process, in alcohol and water, and adding sugar.

Among the elixirs which I have largely prescribed and found most efficient, I may mention an Elixir of Cinchona (*Esencia de Calisaya*), Elixir Beef, Wine and Iron, Elixir Cascara Sagrada (Cascara Cordial).† The special qualifications of these I will briefly present:

What we want in an Elixir of Cinchona are, all the active constituents of a good bark, with a definite amount, by assay, to each fluidounce. I have experimented with various formulas, and in almost every conceivable manner, but have never found a preparation that met all the requirements so fully as the "*Esencia de Calisaya*."

This very delightful Elixir contains the active principles of 40 grains of prime cinchona-bark to the fluidounce, by actual assay,—a strength that I have found in no other preparation of this class of remedies. This fact is of great importance clinically, and, notwithstanding it contains so large a proportion of the drug, it is so skillfully combined with aromatics, etc., as to render it pleasant, palatable, and effective, the patient getting, in a tablespoonful dose, the equivalent of 20 grains of cinchona bark. I generally commence with one or two teaspoonsful, and increase as indicated. My space will allow of reference to but two cases as illustrations of those in which this most valuable preparation has been of service to me.

Mrs. E. G., came to me suffering from nervous depression, consequent loss of appetite and constipation, and with a malaria history. Headaches were frequent. I put her upon the use of Cascara Cordial as a

*Abstract of a paper by William H. Walling, M.D., published in the Philadelphia Medical Bulletin, July, 1891.

† In view of the frequent substitution practised I may mention here that the elixirs to which I allude, and on which I base my statements, are those of Parke, Davis & Co., whose products, having the most confidence in, I specify in prescribing.

axative, and gave static insulation. While ne bowels were relieved, the other symp-oms did not yield, and I commenced the ee use of Maltale and Esencia de Cali-aya. The effects were prompt and gratify-g, and the patient, who expressed a de-ded repugnance to quinine, who could not lerate iron (which was tried), to whom lls and powders, as ordinarily used, were an omination, and who preferred homœo-athic remedies because of their palatability, xpressed herself as being well pleased with ne remedies I used; appetite returned the de-ession was removed, and I kept my patient.

Mr. H., a literary gentleman of sedentary abits, dyspeptic, and naturally with a tend-ncy to constipation, asked advice. He was the habit of taking quinine as a "pick me o" during his work. I placed him upon ascara Cordial, Pepsin Cordial, and Esencia e Calisaya. The remedies met the indica-ons admirably, and the patient expressed mself as being greatly pleased at finding ch a pleasant substitute for his quinine, nd also at finding such palatable remedies very effective.

Another very important elixir is Beef, Wine nd Iron. Where iron is indicated and a ild stimulant likewise, as well as a readily similable nutritive, such a combination if operly prepared is of great value. We ed to get some good effects from the old eparations of beef, wine and iron, but this as due to the iron they contained, and the fect was stimulant only. I have been ing, with much better results, an elixir of ef, wine and iron, containing four grains ammonio-citrate of iron, and two ounces fresh beef peptonized in each fluidounce the wine. Without peptonization the beef rtion of the preparation is valueless as a ntritive. I could cite case after case where is preparation has had the most happy fect.

A very valuable laxative elixir is Cascara rdial—an elixir of Cascara Sagrada; made m a bark from eighteen months to two ars old, in combination with berberis aqui-lium, it is free from those griping qualities common in the ordinary preparations in e market.

Again it has been my experience that in e conditions requiring the presence of an tificial aid to digestion, the tablets or pow-ered form of such digestive ferments did not eet the indications nearly so well as Pepsin rdial (Elixir of Pepsin). This is very pleas-t to the taste and free from unpleasant dor, thus commending it to children and licate females, when such a preparation is pecially required.

I may add that malt, in some form, is now largely used, and in certain conditions is of decided service. I have used nearly, if not quite, all the malt preparations, on the market, liquid, semi-liquid, and powdered. They vary as much in active constituents as do the fluid extracts of the U. S. P. Having tested Maltale, made by Parke, Davis & Co., justice compels me to say that I have found it to be a most valuable preparation for summer use. It has served me so well, and its purity and richness in nutritive elements are so marked, that I prescribe it in preference to any other make, and can confidently recommend it to my professional brethren, where a mild preparation is needed, which may take the place of the poor ales and beers as a beverage, as well as the more expensive malt extracts.

THE POISON OF DIPHTHERIA—The subject of diphtheria has lately occupied a large share of attention, especially in regard to its ætiology and pathology. The unity of croup and diphtheria is becoming more and more accepted amongst English observers, although French and German authorities have long classified them as one disease. An interesting paper on the diphtheritic poison and its mode of action, by Professor Oertel, appears in the Deutsche Medicinische Wochenschrift, No. 45, 1891. He maintains that the therapeutics of diphtheria ought to find a scientific basis in the bacteriological discoveries concerning the ætiology of this disease. Having inoculated some animals in the muscular tissues with diphtheritic membrane, Oertel found that the animals generally died in thirty or forty hours. The lesions discovered on post-mortem examination consisted in a hæmorrhagic inflammation of the muscles, infiltration of small round cells in the viscera, and small hæmorrhages in the serous membranes. He did not, however, succeed in finding the characteristic bacilli in the tissues or organs of the animals experimented on. Oertel concluded from this that in the case of the general diphtheritic infection, the poison is not produced in the tissues and organs by the pathogenic bacteria, but that it is derived from without, and that when it has once entered the organism it is reproduced by means of fermentation, and by a metamorphosis of certain organic combinations. According to Oertel the diphtheritic poison always produces like effects, and there is no occasion to distinguish a local infection from a general one. The results of an injection of diphtheritic poison vary according to the quan-

tity and strength of the dose administered, and according to the site and structure of the organs selected. The first effect of the poison consists in the destruction of cells. The second effect is the formation of a hyaline material at the expense of the cells. When the virus is introduced into the deeper tissues, necrotic foci are formed, which unite with the superficial lesion, so producing considerable infiltration in the tonsils, uvula, and the soft palate. As in the false membranes, notably in those occurring in the trachea and bronchi, the specific organisms do not develop, and the poison rapidly loses its pathological activity, owing to the chemical changes which it undergoes in the tissues. In the cervical and bronchial glands the same alterations are produced as in the mucous tissues, and similar changes may also be noticed in the spleen, stomach, intestine, and mesenteric glands. When the disease has been very acute, the lungs, heart, liver, and kidneys do not present these characteristic lesions; they are simply the site of local inflammation, hæmorrhages, and collections of small round cells. The researches of Oertel have been confirmed by those of Löffler, Roux, Yersin, and Brieger. Oertel supports the treatment introduced by Roux and Yersin, by carbolic acid in the form of inhalations.—*The Lancet*, (London).

Eucalyptus in the Treatment of Intermittent Fever.—In the year 1880 I called attention to the effects of a combination of tincture of eucalyptus and quinine, with a frequent aperient of Carlsbad salts, in a very intractable case of ague, and I am now able to confirm the opinion which was then entertained as to the likelihood of this treatment being generally useful in cases of a like nature. The same patient whose case was then reported has since come to me twice with the same disorder, and on both occasions the result of the treatment was an almost immediate cessation of the attacks. The last time, he told me he was in one continuous fever from Brindisi home. He had regular night-sweats, and was in reality a mere shadow of himself. Since this visit to England he has been almost entirely free from fever.

His wife last year related to me the case of a lady at the station where they had last been, who was apparently dying, when the medical men in attendance were asked whether they would mind trying what had been of such service to her husband. No objection was raised, aud she began to show signs of improvement almost immediately the medicine was commenced.

Another case in which the treatment was adopted with equally good results was that of a chaplain who had been for some years resident in the Madras Presidency.

Dr. Maclagan, in writing on the treatment of rheumatism by salicin, says he was led to its use by the idea that Nature always provides a remedy in those districts where a particular form of disease is most prevalent. This idea would seem to be borne out by the use of eucalyptus in intermittent fever.

A more pleasant way of combining it with quinine is to use the extract, and make it up in the form of a pill. Supposing each pill were made to contain three grains of the extract of eucalyptus and one of quinine, two would have to be taken three times a day; and a teaspoonful of Carlsbad salts, every morning or every other morning as required.

It would be satisfactory to me to learn the experience of those who may put this method of treatment to the test, and to see whether it bears out the idea now formed as to its usefulness.

I may add that I have used eucalyptus with apparently beneficial effects in some cases of influenza.—F. P. Atkinson, M.D., in *The Practitioner*.

Turpentine as a Germicide and Antiseptic.—Although the oil of turpentine (*Oleum Terebinthinæ*, U. S. P.) is not unknown as an antiseptic and germicide, its insolubility in water and irritating properties have hitherto made its use impracticable. That it has its special uses, however, in this connection, I have had abundant testimony.

It is a well known fact among naturalists that if the air of a cabinet be impregnated with the vapor of turpentine, the specimens are safe from the ravages of moths and like intruders so long as this condition of the air of the cabinet remains.

Having learned the advantage of turpentine in preserving entomological specimens I concluded to try its germicidal properties in cases containing surgical instruments. A bacteriological examination made four weeks afterward, and compared with the examination of cases not provided with turpentine convinced me of its efficacy, and I soon afterward applied the same principle to drawers containing towels, gauze, bandages, etc.

The method is simple. The turpentine is placed in flat large-mouthed bottles at the bottom of each case or drawer, the volatility of the turpentine causing the vapor to impregnate the surrounding air.

Of late I have also placed my surgical instruments, the night preceding an operation, in a flat dish containing oil of turpentine. The instruments are completely sterilized, are not injured by the submersion, and are easily dried by a piece of sterilized gauze or towel. The characteristic odor of turpentine can be removed by ether.

The cheapness of turpentine, and the ease with which it may always be obtained, added to its special adaptability in preserving the aseptic condition of instruments, bandages, etc., by its vapor, may make it a valuable addition to the list of antiseptics and germicides.

I have also used benzol in the above manner. Its greater volatility gives it a more rapid germicidal action than turpentine, but its great inflammability admonishes caution in its use.—W. Schleppegrel, A.M., M.D., New Orleans, in *Medical News*, May 30th, 1891.

Euphorin as a Microbicide.—Whether and to what extent euphorin acts as a microbicide and antiseptic, is a question which came on for discussion at a recent sitting of the Reale Accademia di Medicina of Turin. In January last, Dr. Peroni, Director at the Polyclinic, introduced to the notice of the Academy the virtues of euphorin in the ulcerous manifestations of syphilitic affections; and, in the interval, he had, with the help of his assistant Dr. Bovero, put his anticipations to the test of clinical observation. The results, he found, were highly encouraging. Employed in powder, in pomade, and in alcoholic solution, euphorin had proved successful in 54 cases of venereal ulcer, in 27 cases of syphilis of the mucous membranes, in 4 cases of balanoposthitis, in several cases of furfura of the head with consecutive alopecia, in 2 cases of blennorrhagia, and in one of tuberculosis of the skin. The antiseptic value of euphorin had, indeed, been denied by Dr. Monari of Bologna, but in the discussion that followed the reading of Dr. Peroni's paper, it was shown that the Bolognese physician's results were unscientifically obtained, his experiments depending on conditions in the culture-tubes which differed entirely from those in the living tissue—so much so, in fact, that no definite conclusion could legitimately be drawn from those experiments, at variance as they were, both in method and in result, with the rigidly scientific experiments carried out in the Turin laboratory by Drs. Giacosa and Belfanti, tested and confirmed, from the therapeutic side, by Drs. Peroni, Bovero, and Oliva. An interesting point was brought out at the instance of Dr. Foà, who started the question as to whether euphorin acts by modifying the micro-organism or by modifying the soil in which it develops. The answer to this inquiry was that of Dr. Giacosa, supported by the experiments of Dr. Belfanti. Euphorin, it would appear, exerts its specific action directly on the micro-organism; but in the tissues—in other words, in clinical cases—this action is notably increased by the circumstance that euphorin decomposes, and the decomposition, in part, generates phenic acid.—*Lancet* (London).

Hypodermatic Injection of Camphor.—The employment of camphor hopodermatically in solution in oil, spirit, or spirit and ether, is much more general on the Continent than in this country, German and Russian practitioners esteeming this a valuable mode of treating symptoms of impending collapse. Other uses, too, have been found for it—*e.g.*, Dr. Bruno Alexander, of Berlin, has recently published an interesting paper giving the result of an extensive series of observations made during the last two years on the effects of hypodermatic injections of oleum camphoratum, which is composed of one part of camphor to nine parts of olive oil, in a large number of cases of disease of the lungs. The dose given was fifteen minims once a day. As the effects of camphor are cumulative, it was found that four daily injections were as much as could usually be borne without some unpleasant effects, such as headache and restlessness at night. After an interval of a week, however, one more injection could be given without causing any unpleasant symptoms. Phthisical patients seemed to bear continued treatment better than others, and its results in the last stage of phthisis were very valuable, the night-sweats, the irritating cough and the expectoration, being diminished in a remarkable manner, even the first dose effecting a very noticeable improvement in the patient's condition. In hæmoptysis the method also proved very useful, patients being able to get about again, without fear of a recurrence, more rapidly than under ordinary methods. Camphor injections administered in bronchitis increased the secretion at first, and afterwards caused it almost to disappear. They did not seem to be of much use when there was also emphysema. In pneumonia their value was especially marked in weak individuals or in those with cardiac disease, and they cut short follicular tonsillitis and

acute coryza. It was found that in some cardiac cases, where digitalis had ceased to be of benefit, after a few camphor injections, it could again be given with good results.

These injections must, of course, be given to children only in very small quantities, but no effect appeared to be produced on the infants of mothers who were being treated by camphor injections for catarrhal pneumonia.—*Lancet*, (London).

Mercury as a Specific in Typhoid Fever; Conclusions from the Study of Seven Hundred Cases.—From a clinical experience embracing nearly 700 cases of typhoid fever, Smakovsky (L'Union Médicale, April 10th, 1891) concludes that the simplest and most efficacious treatment consists in the administration of calomel in fractional doses, according to the method of Professor Zachariine, of Moscow. Three-fourths of a grain of calomel is given every hour for ten doses, if necessary, or till copious, soft, greenish stools have been secured, a gargle of chlorate of potash being meanwhile used to prevent stomatitis. In cases in which cardiac weakness already exists, an infusion of digitalis is used before the calomel. If instituted in the course of the first seven days of the fever, this treatment is said to abort the disease, even when grave in type. If this result is not obtained, the drug exercises the most favorable action in shortening the duration of the disease and preventing complications. A second course of calomel may be given a day's interval after the first, the abortive action being produced sometimes only after this second administration. During the interval, and subsequently, if the disease is not aborted, the author prescribes:

℞ Subnitrate of bismuth, 2½ grains.
Pure naphthalin, $\frac{3}{10}$ grain.
Sulphate of quinine, 1½ grains.
Sig.—One powder. Four of these daily.

The author is convinced that the mortality should be *nil* in all cases where the treatment is commenced before the tenth day of the disease,excepting with the very old, or where it occurs in the course of another grave malady.—*University Medical Magazine.*

The Dermal Administration of Quinine to Children.—Troitski has recently undertaken a long series of observations, in the children's department of a poorhouse, with the object of ascertaining what was the best form of external application, and how far absorption is possible under these circumstances. His experiments, which were conducted on healthy children, about fifty in number, are published in the current number of the Virch. He made some trials with ointments of which the bases were vaselin lard, or lanolin, but very soon discarded this form of application, as he found that in order to get any appreciable quantity of the drug absorbed it was necessary to spend a long time rubbing in the preparation, which was not only tedious to the operator but very fatiguing to the child. Contrary to what most of the writers on the subject have advised, the region of the body selected for the application was the back of the thorax. Solutions of quinine were then tried, with rather more success, 1 part of the hydrochlorate of quinine being dissolved in 30 of rectified spirit, or in 20 of spirit and 10 of glycerin. Of this, a teaspoonful or a teaspoonful and a half, was rubbed in twice a day until the skin became quite dry, the precaution having been previously taken of washing the child well. The urine was examined both by chlorine water and by iodine tests, and observations made on the comparative results in the same children. The conclusions came to were, that though the drug is undoubtedly absorbed by the skin from such solutions as were used, the amount was so small and uncertain as to render it impossible to administer the dose that may be desired, by the external method. The good effects that are said to have been produced in fever by the lotions, Dr. Troitski would ascribe, mainly at least, to the refrigerating action of the spirit on the skin.—*Lancet*, (London), May 16th, 1891.

The Hand Spray in the Treatment of Fevers.—In the treatment of typhoid and malarial fevers, and in all conditions of hyper-pyrexia where the heart's action is too feeble to permit the administration of analgesin, phenacetin, or acetanilid, and where an immediate reduction in the temperature is necessary, I have, for the past fifteen months, employed the hand-spray.

I use an apparatus that throws a continuous spray, and a solution composed of one drachm of aromatic spirits of ammonia and one drachm of table salt to a pint of warm water. The patient is stripped, and sprayed from head to foot. The upper portion of the body is first sprayed; and while an assistant, with a towel, is drying this, the lower extremities are subjected to the same treatment.

After the patient has been thoroughly dried, he is covered with a blanket, and soon falls into a calm, refreshing sleep, followed by perspiration, a reduction of the temperature, and a stronger and slower pulse. The relief thus obtained is of course only temporary, but it is just so much gained; and in the treatment of febrile conditions, experience has taught me that "every little helps."

The advantages of this method over the wet-pack and sponge-bath are obvious. It is easier to handle; it is not necessary to disturb the patient; it is more elegant, more refreshing, and equally as effective.

I have recently used this in the treatment of a young Englishman who came here from Demerara suffering with "jungle fever," and I never failed to reduce the temperature two or three degrees. But it is in treatment of typhoid and continued fevers, where the patient's life frequently depends upon an immediate reduction of the temperature, that this method has been found particularly useful.—J. F. Lynch in *Virginia Medical Monthly*.

Electro-Kataphoresis.—Dr. Peterson, of the New York College of Physicians and Surgeons, in a paper recently read before the Electro-Therapeutic Society, of Philadelphia, said that while the introduction of drugs into the human body by electricity had been suggested as far back as 1859, by Richardson, it was not until the past few years that it had been practically applied. The author, himself, had experimented successfully with this mode of administering several remedies, and found it to be practicable, not only in the administration of solutions where great precision is not required, but also for some of the more potent alkaloids and salts under certain precautionary conditions. This method consists of applying on the skin a solution of the drug to be administered, and passing an electric current through that portion of the body covered by the solution, the theory being that the current conveys the medicine into the system. The skin is sometimes first treated with ether to dissolve out the oil globules which might retard the inward passage of the drug. The method may be employed when it is desirable to diffuse medicines through the whole body, an ordinary bath tub being converted into an anode by placing in it a sheet of zinc connected with an insulated copper wire. The therapeutic advantage of this method is greatest in maladies of the skin and mucous membrane, which has led to considerable interest in it on the part of dermatologists, but as its merits become better known, its sphere of usefulness will be enlarged. For local anæsthesia in minor surgical operations it is quite successful, and is destined, the author believes, to be much employed in the treatment of gout and rheumatism.—*Druggists' Circular*.

Some Clinical Experiences with Eucalyptus Oil.—J. M. Brainard, M. D., in the Journal of the American Medical Association, summarizes his experience with oil of eucalyptus as follows:

I am not putting oil eucalyptus forward as a specific for consumption, for it is not; but experience has led me to put high therapeutic value upon it in persistent, irritable cough, chronic bronchitis, chronic interstitial pneumonia, and to a less degree in tuberculosis. Cases 1, 12 and 15 were certainly tubercular. There can be but little doubt that case 5 was tubercular. Five is well; there is some prospect that 12 will get well; 13 will die, and 1 is already dead. Case 7 was a case of gangrene of the lung, and is recovered. Cases 2, 3, 4, 6, 9 and 10 had symptoms of incipient phthisis. All are living, and in as good or better health than they were a year ago. Case 8 was a case of irritable cough. Case 10 is a case of chronic interstitial pneumonia. Eight is cured, and 10 is much improved.

Eucalyptus oil is very permeating. It is eliminated by the lungs, the skin, and the kidneys. It can be smelled upon the breath, upon the clothes when changed, and in the urine. It is antiseptic. It has a healing effect upon bronchial epithelium, and a sedative effect upon the peripheral nerves in the respiratory tract. It is because of these physiological effects that the therapeutic results are produced.

I administer it in five to ten minim doses, in emulsion, every four hours.

Removal of Steel from the Eye by an Electro-Magnet.—At a recent meeting of the St. Louis Medical Society, Dr. Charles Barck reported a case of successful extraction of a piece of steel from the vitreous humor by means of an electro-magnet. Its interest resides chiefly in the unusually good vision that has been finally obtained. The corneal section was made downward, an iridectomy done, the debris of lens opened, and an electro-magnet introduced. The foreign body was located deeper than had been at first supposed, and only after the introduction of the magnet several times was

the steel secured and removed. It was about one line long and half a line wide. The healing process was regular and uninterrupted; the opaque masses of the lens which were left, gradually underwent partial absorption, but much was still retained. By a subsequent needle operation a tolerably round pupil was obtained. The subject's vision was $\frac{8}{10}$ with convex glass of 12 dioptrics, and with a convex lens of 15 dioptrics he reads Snellen No. 5. The vitreous humor is completely clear and transparent, and the fundus can be recognized distinctly. Dr. Barck quotes statistics to show that in only a comparatively small number of cases of such operations is vision preserved. He adds that even the preservation of the eyeball, however, is something to be accomplished, because a foreign body having penetrated one eye, is not only a constant source of danger to that eye, but also subsequently to the other, which is apt to be affected by sympathetic inflammation, in many instances necessitating enucleation. In using the electromagnet, no special battery is necessary.—*Druggists' Circular.*

The Number of Tubercle Bacilli in Phthisical Sputum.—Dr. E. H. F. Nuttall, of Johns Hopkins University, has shown that phthisical patients expectorate from 250,000 to 4,000,000,000 bacilli in twenty-four hours. Taking the average of, we will say, 100,000,000 per day, the patient would expectorate 365,000,000,000 bacilli a year, and if he lives three years, the total number of microorganisms expectorated during his illness would be 1,095,000,000,000. Or multiply the year's annual out-put of 365,000,000,000 by 70,000, the number of cases of phthisis in this country, and we are confronted with the sanitary problem of destroying 75,000 times 365,000,000,000 microbes every year. These are rather discouraging figures, but it may be supposed that the vast majority of tubercle bacilli in the sputum die as the result of intercurrent disease or a pitiless environment.—*Medical Record.*

Diet for Invalids.—The importance of a suitable and sufficient dietary, even in health, is too obvious to require assertion. In sickness it is a no less essential condition of endurance and recovery. The scope, as regards variety, may be more limited, but there is practically no limit as to nicety in preparation. The primary object, prevention and repair of tissue waste, is attained by skilful attention to details of cookery as much as by judicious choice of materials. Appetite has to be tempted, digestion suited, assimilation and elimination maintained effectually and without irritation—in short, nutrition and satisfaction are as needful to success in treatment as they are often difficult of attainment. At the same time, it is well to note that great elaboration is seldom requisite or advisable. Simplicity, care, and common sense are supreme in the invalid's kitchen. Where they control operations, and means allow due scope for their exercise, as happily they do in many households, the patient may congratulate himself on some degree of personal comfort. It is otherwise with the poor. Here, indeed, thrift and judgment will accomplish much, but these unfortunately are not to be relied upon. The simplest kitchen rules; the plainest things in diet are only too liable to misunderstanding and misuse. Rough and ready are the methods; equally rough but unready and unappetizing the product; unsuccessful the nutritive result.

A New Treatment of Tuberculosis.—For some time past, M. Lannelongue, of the Trousseau Hospital, Paris, has been making observations upon the effects of chloride of zinc in the treatment of tuberculosis, his object being to induce in tubercular formations the fibrotic changes which constitute the basis of "naturally cured" tubercle. At first his trials were made purely on external tuberculosis, joints, skin, etc., but from a communication read at the Academy of Medicine on the 6th inst. he announces the applicability of his method to pulmonary tubercle. His results have excited considerable interest, and will be scrutinized by a special committee.—*Lancet*, (London).

Preparation of Sponges for Surgical Uses—In an article on this subject, the editor of the Philadelphia Medical and Surgical Reporter reaches the following deductions:

1. That a solution of the bichloride of mercury is the safer, and therefore the better, sterilizing agent for sponges. It is also the cheaper drug.

2. That sponges with open, somewhat coarse, network, are least likely to be septic, from causes connected with their preparation.

3. That large sponges, and thick, dense ones, should be prepared with special care, especially after contact with fœtid pus or other infected substance.

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Original Articles.

ÆTIOLOGY OF DIPHTHERIA.*

BY V. C. VAUGHAN, M. D.

That the Loëffler bacillus is a cause of diphtheria no one can now deny. The fact that this germ, although found only at the seat of inoculation, causes marked systemic disturbances, indicates its action must be due to its soluble products. This was early recognized by Loëffler, who, in 1887, attempted to ascertain the nature of the poison. A flask of bouillon containing peptone and grape sugar was, three days after it had been inoculated with the bacillus, evaporated to 10 c. c., and this was injected into an animal, but was without effect. A second flask of the same material was extracted with ether, but this extract was also found to be inert. Next, some neutral beef-broth was extracted with glycerin, some four or five days after it had been inoculated with the bacillus. The glycerin extract, when treated with five times its volume of absolute alcohol, deposited a voluminous flocculent precipitate, which was collected, washed with alcohol, and dried and dissolved in a little water. A further precipitation with alcohol, and a current of carbonic acid gas, secured a white substance, and the injection, subcutaneously, in Guinea-pigs, of from 0.1 to 0.2 gramme of this dissolved in water, caused marked pain, followed by a fibrous swelling with hæmorrhage into the muscles and œdema, terminating in necrosis. From these studies, Loëffler concluded that the poison belongs to the enzymes.

Roux and Yersin found that bouillon cultures from which the bacillus had been removed by filtration through a Chamberland filter, are poisonous, especially cultures which are four or five weeks old. The results obtained varied with the amount of the fluid, the species of animal, and the method of administration. The effects observed were a serous exudation into the pleural cavity, a marked acute inflammation of the kidney, fatty degeneration of the liver, especially after injection into a blood-vessel, and œdematous swelling in the surrounding tissue after subcutaneous inoculation. In some instances, in dogs, rabbits, and Guinea-pigs, paralysis, generally in the posterior extremities, followed. The action of the poison was found to be very slow, and as a rule death occurred days, and in some instances weeks, after the inoculation, and was preceded by marked emaciation.

The cultures first employed were seven days old; older cultures (six weeks) contain more of the poison and the symptoms appear within a few hours. In cultures especially rich in the poison, a small amount (from 0.2 to 2.0 c. c.) injected under the skin in Guinea-pigs, suffice to induce the symptoms. Mice and rats are markedly insusceptible, but succumb to large doses.

Heating to 100° C. for twenty minutes renders the poison inert, and a temperature of 58° C. maintained for two hours markedly lessens its virulence.

The poisonous substance is precipitated by absolute alcohol, and carried down mechanically on the addition of calcium chloride to the filtered culture. The investigators agree with Loëffler that the poison belongs to the enzymes. The great toxicity of this substance is indicated by the statement of Roux and Yersin that 0.4 milligramme suffices to kill eight Guinea-pigs or two rabbits, and that 2 centigrammes of the calcium chloride precipitate, containing about 0.2 milligramme of the pure poison, will kill a Guinea-pig within four days.

Brieger and Fraënkel have made a very complete study of the chemical products of the Loëffler bacillus. They employed cultures of bouillon and peptone containing from five

* Read before the Michigan State Medical Association, June 12th, 1891.

to six per cent. of glycerin, and others containing ten per cent. of sterile fluid blood serum. The latter were found to be the most suitable. In these the bacilli grow most abundantly. In all cases they confirmed the statement of Roux and Yersin, that the cultures, at first alkaline, became strongly acid and finally again alkaline, with the exception that the glycerin cultures remained acid.

For the removal of bacteria two methods were employed. First, the bacilli were destroyed by heat. When a temperature of 100° C. was employed the cultures were rendered inert, but it was found that exposure for from three to four hours to a temperature of 50° C. was sufficient to destroy the germs, while the virulence of the chemical products was not effected. The second method of removing the bacteria consisted of filtration through a Chamberland filter. The germ-free filtrate could be heated to 50° C. without loss of toxicity, while a temperature of 60° C. rendered it inert. In the majority of the experiments the filtration method was used, and in this way a large quantity of a poisonous fluid of a uniform strength was obtained.

Varying amonnts of this fluid were used upon animals, mostly Guinea-pigs and rabbits, and it was found that the effects varied with the quantities employed and the methods of administration. The symptoms appeared most promptly when the injections were made directly into a blood-vessel. Of four rabbits which were given subcutaneously, respectively, 1, 2½, 5, and 10 c. c. of the filtrate on December 28th, the first died January 4th; the second, January 2d; the third, December 31st; and the fourth, December 30th. In all cases in which death did not occur too early, paralysis appeared. The limbs were first paralyzed, and this was true whether the fluid was administered intravenously or subcutaneously. The *post-mortem* appearances were identical with those observed after inoculation with the bacillus, with the exception of the absence of the pseudo-membrane. After subcutaneous injection there was a gelatinous, grayish-white, sometimes reddish, œdematous fluid formed at the point of injection, and, after large doses, necrosis. In cases in which death was delayed, there were effusions into the pleura, fatty degeneration of the liver, and inflammation of the kidneys. Especially marked were these cellular changes in rabbits which were treated with small amounts intravenously.

Brieger and Fraënkel conclude this part of their report with the following statement: "We have shown that the Loëffler diphtheria bacillus produces in its cultures a poisonous soluble substance, separable from the bacteria, which causes in susceptible animals the same phenomena which are induced by inoculation with the living micro-organism. We have further shown that this substance is destroyed by a temperature over 60° C., but that it can be heated to 50° C., even in the presence of an excess of hydrochloric acid, without being destroyed. This last fact is contrary to the assumption that the chemical poison of the diphtheria bacillus is a ferment or enzyme."

The fluid was tested for basic products, but with wholly negative results, except that small amounts of kreatinin and cholin were found. It was also distilled at from 20° to 35° in a vacuum, and the distillate was found to be inert.

The poisonous substance was found to be insoluble in alcohol, soluble in water, and non-dialysable. It was precipitated by saturation with ammonium sulphate.

The substance was obtained by allowing the germ-free filtrate, after being rendered feebly acid with acetic acid, to fall into a large volume of absolute alcohol. It was purified by repeated solution in water and precipitation with alcohol. It contains a large amount of sulphur, and responds to the biuret and Millon tests. It is therefore classified among the albumens. Since it is not precipitated by saturation with magnesium sulphate at 30° C., it cannot belong to the globulins. The fact that it is precipitated by saturation with ammonium sulphate, and that it does not dialyze, shows that it is not peptone. It is therefore classified by Brieger and Fraënkel among the albumens, and is designated as a "toxalbumen."

This proteid induces in animals all the symptoms and post mortem appearances which have been mentioned as following the administration of the filtered cultures. It is

to be noted that the injection of small quantities of this proteid (2½ milligrammes per 1 kilogramme of the body weight of the animal), does not produce its effects until after the lapse of weeks, and possibly months. This peculiarity in action distinguishes this class of substances from all other chemical poisons, and it has received as yet no satisfactory explanation. There is no reason for believing that the body obtained by Brieger and Fraënkel is chemically pure, and until it has been obtained in this condition we can only speculate concerning its true nature.

It should be remarked that the Loëffler bacillus shows not only marked morphological variations, but that it is very variable in its virulence, some cultures having been obtained which are wholly without effect upon animals. From cultures of this kind Brieger and Fraënkel prepared a non-poisonous albumen, differing in its ultimate composition and in many of its chemical reactions from the poisonous one.

Fraënkel has been unable to secure immunity in animals against diphtheria by the employment of small doses of the "toxalbumen." If the dose is large enough the animal dies. If it is smaller, the animal seems to become more susceptible and succumbs more readily to inoculations with the germ. While this is true of the filtered culture, it is not the case with that which has been sterilized by heat. Fraënkel finds that if from 10 to 20 c. c. of a culture of the baccillus three weeks old, which has been heated for one hour at from 65° to 70°, be injected under the skin of the abdomen of Guinea-pigs, immunity against subsequent inoculation with the virulent germ is secured, provided that the inoculation is not made earlier than the fourteenth day after the treatment with sterilized culture. He thinks that the culture contains two specific albumens, one of which is poisonous while the other gives immunity. The former is destroyed by a temperature of from 65° to 70°, while the other retains its characteristic properties. He admits the possibility that the poisonous albumen may be converted into the other form by the high temperature. He finds that the poisonous albumen may be converted into the other form by the high temperature. He finds that the modified culture, which gives immunity, is of no service for therapeutic purposes, and that, if an animal be treated with it directly after inoculation with the germ, death is not retarded, but hastened. From these experiments he concludes that the vaccination albumen at first lessens and subsequently increases the resistance of the animal.

Spronck and his students have confirmed the above statements concerning the toxicity of the germ-free cultures of this bacillus. They have also called attention to the albuminuria following the employment of this poison. In the urine they find casts, and white and sometimes red blood corpuscles. Microscopic examination of the kidney after death shows the same changes which are observed in the diphtheria nephrites of children. Babés also finds that the germ-free cultures produce the parenchymatous degenerations of the internal organs which are found in the human body.

Tanyl has shown that the chemical poison is formed in the body as well as in culture flasks. A large piece of pseudo-membrane was macerated in water in an ice chest for twenty-four hours, and then filtered through porcelain. The filtrate injected into animals produced all the symptoms which have been obtained by a similar employment of artificial cultures. Tanyl also observed that in some cases in which the animals were inoculated with the sterilized culture through the mucous membrane, a pseudo-membrane formed at the point of injection.

That the Loëffler bacillus is widely distributed, is shown by the fact it has been detected in nearly every civilized country. I have had no difficulty in finding it in two epidemics in this State. My first test was made with some membrane sent to me from Grand Rapids in January, 1890, and I again detected it in an epidemic occurring at Vienna, in Montmorency county, in June and July of the same year. In the latter instance, I made the investigation under the direction of the State Board of Health, and reported the result to that Board. Since that time the Loëffler bacillus has been found by Welsh and Abbott, of Baltimore, and Prudden, of New York.

I repeat, that there can no longer be any doubt that this germ is a cause of diphtheria.

It has been found in the pseudo-membrane in a large proportion of the cases (not in all) examined. It has been isolated and grown in pure cultures. Susceptible animals inoculated with pure cultures develop the disease in a typical form. The chemical product has been isolated, though probably not in a chemically pure state, and with this poison the typical symptoms and lesions of the disease have been induced in the lower animals. In short, the proof that this germ is a cause of diphtheria, is complete.

We now turn to the question whether or not there may be other causes of the disease. Nearly all the bacteriologists who have studied the subject have met with cases in which the Loëffler bacillus could not be found. Of course negative evidence is never so conclusive as positive evidence, but the failure to detect in all instances has been so nearly universal that it must be admitted that there are cases which at present cannot be distinguished clinically or anatomically from those bearing the Loëffler germ, in which this organism does not exist. I have not time to enumerate all of the observers who have failed to find the Loëffler bacillus. Prudden, in 1889, studied twenty-four cases in New York, and in none could he detect this bacterium, but he did find a streptococcus, which he at that time believed to be the cause of the disease. Others have frequently met with this organism, sometimes associated with the bacillus, at other times without it. The chemical poisons of the streptococcus have not been studied. Recently, in the study of a second series of cases, Prudden has found the Loëffler bacillus in all. It has been proposed to restrict the name diphtheria to those cases which are caused by the Loëffler germ, and to designate all others as pseudo-diphtheria. However, as there is at present no known clinical distinction, this proposal is not likely to be adopted. Moreover, since those of the second class are, so far as we know, equally fatal and equally contagious with those of the first class, the term pseudo-diphtheria, it seems to me, would be a very unwise one to employ. To tell an intelligent father that his child is not suffering from true diphtheria, and that it has pseudo-diphtheria, when death is just as likely to follow the latter as the former, would place the physician in a position in which I certainly would not like to stand. Bacteriologists are very reluctant to give up the old idea that each disease is due to one, and only one, bacterium, which can be distinguished morphologically from all other germs; but recent studies in the summer diarrhœas of infancy, in tetanus, in diphtheria, and in typhoid fever, indicate that similar, if not identical, poisons are generated by germs which are morphologically different.

To what practical conclusion do these studies point? They show that diphtheria is due to germs which grow at the point of local lesion and develop most virulent poisons, which are absorbed and produce the symptoms and death. They show that the germ is to be assailed with the most potent germicides compatible with the safety of the patient, and that the poisonous action of the chemical product should be combated by the administration of tonics and stimulants. Those who believe so much in the importance of local treatment, and those who rely so greatly upon general medication, can alike find in this, verification of their pet theories.

Ann Arbor, Mich.

DIPHTHERIA—WHAT SHALL WE DO WITH IT?*

W. C. HUNTINGTON, M. D.

Diptheria is now understood to be, primarily, a local affection caused by the action of certain microbes upon a susceptible surface; and, secondarily, a systemic infection, caused by the absorption of the poisonous products of the primary disease.

The condition necessary for the production of the disease is the presence of the diphtheritic microbes, in quantity and activity sufficient to overcome the individual's powers of resistance. This may result from a powerful colony of microbes acting upon a resistant surface, or relatively weak colony acting upon a susceptible surface; but, once the disease becomes established, the patient with greatest susceptibility suffers most, providing the attending circum-

* Read before the Michigan State Medical Society, 1891.

stances are the same. Either condition above mentioned would produce a relatively long period of incubation, with, perhaps, a prodromal period; for it seems probable that microbes may exist in the fauces in such quantity that their products will cause constitutional symptoms before actual inflammation occurs; on the other hand, an extraordinary exposure, such as by inoculation or the sucking of a tracheotomy tube, leads to an almost immediate attack.

The age of greatest susceptibility is between two and ten years, with little, if any, relative advantage in favor of either sex. Susceptibility diminishes from the latter period to adult life, with the greater immunity among males after puberty.

Children with light yellow hair, and complexion of nearly the same hue, seem most susceptible, while negroes seem to enjoy some immunity against the disease.

Diphtheria is influenced, in a remarkable degree, both in its propagation and in its effect upon the system, by atmospheric conditions; and this fact should be a prominent element in prognosis and in estimating the value of treatment. The atmospheric conditions in which diphtheria shows its greatest virulence, are a temperature just above the freezing point, with a rarefied air loaded with moisture. If, while a diphtheritic patient is in a critical condition, such weather occur, the rarefied air, still further attended by moisture, causes increased respiratory effort, thus increasing the exhaustion, and deficient oxygenation of blood, with defective elimination. The devitalized tissue and moisture feed the microbes to increased action. The stimulating quality of the blood is impaired, and the reduced atmospheric pressure invites it into the peripheral circulation, and the supply at the nerve centers is diminished. Instead of sunshine, gloom has settled upon the earth, and as the patient looks to friends for relief, he reads anxiety and grief on every countenance. Hope has gone, cheer has fled, and the patient dies.

The controversy as to whether diphtheria always results, either directly or indirectly from a previous case, or whether it may originate *de novo*, under any general or special unsanitary conditions, seems settled in favor of the former; but unsanitary conditions have great influence upon the propagation and virulence of the disease.

The tendency of opinion in the profession, at the present time, seems to be to under-rate the agency of the air in conveying diphtheria. I believe that this is because the rural districts are too seldom heard from. Dr. J. Lewis Smith says: "The area of contagiousness of diphtheria is small, extending only a few feet." Does the air destroy the diphtheritic germs within a few feet of the patient? If so, why does it not do so in infected premises and clothing, where it remains active for months or, perhaps, years? Or, does the air, simply by dilution, dessication and reduction of temperature, so reduce the number and activity of the germs that would be received by one individual, that they do not overcome the resistance of persons of ordinary susceptibility? Do not these germs, carried by air currents to distances without limit, take root in congenial soil, propagate, and produce sporadic cases.

Three severe epidemics of diphtheria have occurred in Howell within the limit of my professional experience. The first one seemed composed entirely of sporadic cases. They were about equally divided between village and country, with no apparent possible connection between them, or any common source of contagion, save the common air and contagion within the family. The cases invariably occurred amid unsanitary conditions; the weather was of the kind that I have heretofore described, and a large proportion of the patients died. With the occurrence of continued freezing weather, the epidemic subsided.

Several years afterward, one year ago last winter, we had, practically, a repetition of our former experience, excepting that the cases were confined to the village. There were, perhaps, evidences of contagion in some cases. The weather was nearly the same as before, much of the time.

The third epidemic occurred last winter. The first case occurred in the fall, amid unsanitary conditions, in a rather isolated portion of the village, where it had prevailed the most extensively the year before, and probably resulted from the previous epidemic. The second case, living near the

first one, was a very mild one of nasal diphtheria. The child was not confined to the house, and played freely with other children until neighbors took alarm, and I was called. I found a small amount of deposit upon the tonsils, but the anterior nares were lined with pseudo-membrane. Many, if not all the cases last winter were, probably, either directly or indirectly contagious, and occurred without regard to other circumstances or conditions.

The lesson to be drawn from this seems to be that contaminated air should not be allowed to escape from the sick room. Diphtheria usually occurs when a fire can be kept in the room. The effort should be to create as great a draught as possible and modify the heat by admitting outside air. This, if possible, should be received from the same direction as the outside currents, and the result will be to create currents which will prevent the subsidence of germs and convey them either into the stove or within cremating distance of its outer surface.

Dr. J. Lewis Smith reports excellent disinfectant results from the following:

℞ Acidi carbolici, Ol. eucalypti, āā ʒ j.
Spiritis terebinthinæ, ʒ viij.

Mix. Add two tablespoonsful to one quart of water in a shallow pan, with a broad surface, and maintain it in a constant state of simmering in the room occupied by the patient.

It would certainly be desirable if the air in the room could be kept constantly disinfected, as Dr. Jacobi states that convalescents are sometimes re-infected from the room which they have themselves infected; besides which, experience has proven the above remedies to be efficient in the direct treatment of the disease.

For the first twenty-four or forty-eight hours, diphtheria is essentially an inflammatory affection, and only distinguishable from the non-virulent tonsilitis by the false membrane. At the end of the period just mentioned, the swollen tonsils are covered with this deposit, and now a somewhat abrupt defervescence usually occurs. With the inflammatory action the microbes have multiplied rapidly, until their product, which seems to be a powerful antipyretic, has been absorbed in sufficient quantity to subdue the fever. In the absence of fever, the inflammatory action subsides. The conditions which produced so large a colony of microbes cease. They are weakened for lack of supplies, are destroyed by the germicidal fluids and phagocytes of the patient, and recovery follows. This is intended for a picture of a typical, uncomplicated, self-limited case. Many such cases occur, and would recover without treatment. If, however, the inflammatory tendency in the system is too great to be subdued by the antipyretic action of the ptomaine, the disease, unless controlled, progresses until the patient is poisoned to death by its products.

Diphtheria is prone to be so erratic in its course, and so modified by peculiarities of constitution, and by atmospheric and sanitary conditions, that it is extremely difficult to place a correct estimate on the value of different remedies or methods of treatment.

On page 26–I. of Sajou's Annual for 1889, it is said that: "Stumpf lost 76 per cent. of his cases of diphtheria in an epidemic from May, 1883, to March, 1884; that in December, 1884, he commenced treating his cases with corrosive sublimate, and out of thirty-two cases all but two recovered; that in most of the cases the temperature fell to normal in from twenty-four to forty-eight hours, without other treatment."

Now, while I believe that corrosive sublimate is one of our best remedies for diphtheria, I consider this report very misleading. It seems certain that the epidemic, lasting through ten months, occurred under circumstances which rendered it very virulent and fatal, and that if corrosive sublimate had been employed, still a large number would have died. As no cases are reported for the next nine months, there was evidently a radical change in the conditions for the better. The epidemic occurring in the next December probably froze up soon after it commenced, and did not thaw out until spring. When he says that "in most of the cases the temperature fell to normal in from twenty-four to forty-eight hours" without other antipyretic, he shows that they simply pursued the course which I have indicated as that of typical, self-limited diphtheria, and many of them would have recovered without treatment.

I have treated quite a number of cases

without a fatality, and in a subsequent epidemic lost all of the children in a family, four in number, under the same treatment. And yet treatment is important.

In the first stage, an antipyretic dose of acetanilid, followed by an anti-periodic dose of quinia, is comforting to the patient, and may be accompanied by the following:

℞ Atropiæ sulph., gr. j.
Zinci. sulph., ʒ j.
Sacchari alb.,
Amyli pulv., ää ʒ ss.
M. Rub thoroughly together.
Dose for adult, grs. iij or iv.

This may be given once in two hours throughout the inflammatory stage, and is an excellent remedy in simple tonsilitis. The purpose of the starch is to prevent too rapid solution, and thus prolong the period of application. It should be administered dry on the tongue and swallowed as it gradually dissolves.

As soon as false membrane appears, an active germicide should be employed, and among the best of these are three preparations of mercury, the bichloride, the biniodide, and the cyanide. The bichloride is, perhaps, best administered in the form of spray, in the proportion of one grain to the pint, with one drachm of sodic chloride, and may be used once in two hours, alternating with the zinc-atropine powder.

The biniodide of mercury has always been the main reliance of the homœopaths. Their mode of application is good, and they administer it in doses sufficiently heroic to satisfy the most aggressive regular. It has undoubtedly done good work in their hands, and would do better if properly reinforced by other equally efficient and well applied remedies. Their first decimal trituration is a ten per cent. mixture, with either sugar of milk, or equal parts of cane sugar and starch. One grain of this would be the maximum *regular* dose for an adult. The bright red color and sweet taste make it attractive to children, and it may be given in the proportion of half a grain for an adult, once in two hours, instead of the bichloride. It should be administered dry upon the tongue, and starch added. I have never used the cyanide, but suppose that its results would be practically the same.

At the end of the acute febrile stage, we have mainly a condition of systemic infection. Muriate tincture of iron may now be substituted for the zinc, and if biniodide is used, the dose should be reduced one-half, and alcohol given just before each dose of the other remedies. The extent to which alcohol may be given with benefit is indicated by Dr. Jacobi, when he says: "I know that cases of young children with general sepsis, commenced immediately to improve when their (fl ʒ iij of) brandy was increased to four times that amount in a day."

Immediately after each dose of iron a liberal dose of saccharated pepsin, moistened with lactic acid, should be taken upon the tongue for gradual solution. In this way the acid condition of the pharynx caused by the iron, is utilized to assist the action of the digestive ferment.

It is important that the membrane should be dissolved *in situ*, melting away about the edges, and growing thinner, until it entirely disappears. The exfoliation of large pieces, though gratifying to patient and friends, is cause for grave apprehension, especially if they are stained with blood; for there is danger that sufficient abrasion has occurred to result in fatal septicæmia.

The treatment of nasal diphtheria is simple, but important. It is of much less importance *what* the injection consists of than that it should be warm, non-irritating, and thoroughly applied. It should be commenced as soon as swelling of the glands at the angles of the lower jaw occurs, whether any other evidence exists or not, for this symptom shows that the posterior nares are invaded; injections should be applied every half hour until the swelling subsides. The fluids should be forced through into the throat each time, and when this is done it will cause more or less of choking. The sensations of the patient cannot be relied on.

Since peroxide of hydrogen has been reported as an excellent local application in diphtheria, it would seem worthy of a trial with the steam atomizer in the laryngeal variety.

I have nothing to say of diphtheritic paralysis, except to report a case. James M.—

Father died of consumption when he was a child. Mother has been troubled many years with chronic bronchitis. When I first visited him his left tonsil was much swollen and entirely black, but there was no false membrane. The next day there was deposit upon the other tonsil and about the edges of the black one, which soon macerated to an ash color. He eventually recovered, with sloughing of entire left tonsil. After complete recovery he went to a neighboring village, had the "grip," after recovery from which he came back and had general paralysis. He had double vision, articulation was impaired, and both arms and legs were practically helpless. He recovered entirely in about four months, under general tonic and hygienic treatment.

Howell, Mich.

SALOL IN TYPHOID FEVER.*

BY HUGH MC COLL, M. D.

I do not intend, in this paper, to discuss the pathology of typhoid fever, nor its treatment by other methods, but simply to give an experience with the use of salol in 36 cases.—Treated by myself, 17 cases; Dr. Blake, Attica, 5 cases; Dr. S. A. Snow, North Branch, 14 cases; all during the fall of 1889.

We all have been anxiously watching for some form of treatment which would modify favorably, if not abort, this trying and deadly malady. I think that more of us have come to the conclusion that meddlesome medication is worse than no medication, and that at present all heroic measures by powerful antipyretics, whether in the way of drugs or the cold bath, are not only the reverse of beneficial, but decidedly injurious, in common practice. The local manifestations of the disease are to be found in the intestines, and the trend of treatment has of late been to find some unirritating local disinfectant of the bowel. A large variety of remedies has been used, beta-naphthol, resorcin, mercurial preparations, muriatic acid, etc. For some time I have been using salol for the diarrhœa of children and adults during the heated term, and am well pleased with its effects. The stomach tolerated it readily, and the effect upon the diarrhœa was certainly marked. The salol undergoes but little change in the acid secretions of the stomach, but as soon as it enters the small intestine and comes into contact with the billiary, pancreatic, and intestinal alkaline secretions, it is slowly, as it passes along the intestine, broken up into its original constituents, or something approaching them, and these coming into contact with the diseased surfaces, produce a beneficial effect locally, neutralizing, no doubt, to some extent the ptomaines. The disease itself is not materially shortened, but is rendered milder. The patient is enabled to take more nourishment. The temperature does not rise so high. Sordes on the teeth give little trouble, and the dry, black, hard tongue gives place to a soft coated tongue. The troublesome diarrhœa of eight to ten stools a day is limited to two to four movements, not painful or exhausting. Tympanitis, if present before commencing the remedy, soon disappears, and the patient is altogether more comfortable. Nourishment is taken readily. In patients where the remedy had been used from the beginning of the attack, I thought I could see a tendency to shortening of the disease, but as the number of cases was not large, nothing definite can be said regarding this point. I will not detain with long histories, but report two typical cases.

Case 1.—One cold October Sunday afternoon, I was called to see Mrs. K., a woman about 32 years of age, the mother of five children. I found them living in a small house containing two rooms, one of which was used as the sleeping room, the other as the cooking and living room. I found that the patient had been sick 10 or 12 days, without medical attendance, and with very little care. She lay on her back, in the peculiar attitude of patients with this malady: Mouth open, tongue dry and black, lips cracked, teeth covered with sordes, flies walking into her mouth and out again; eyes open and staring listlessly; abdomen tympanitic; bed clothes soiled by discharges from the bowels, which her husband told me occurred every two to two and a-half hours; temperature 104½°; pulse 122. After scolding the husband for his neglect, and ordering a cleaner state of things, I put her on

* Read before the Michigan State Medical Association, June 12th, 1891.

salol, 5 grs., and bismuth subnit., 5 grs., every four hours. Next day things were clean; treatment continued; not much change; but in three days' time the contrast to that first day's report was marked. Tympanitis almost entirely gone; stools limited to three or four a day; tongue moist and soft, still heavily coated; no sordes on the teeth; taking milk freely and with apparent relish; temperature 102; pulse 90. The bismuth was discontinued, and the salol continued through the course of the disease. Her convalescence was slow, but after the the first three days, when it looked quite hopeless, no anxiety was felt regarding the issue.

Case 2.—A child, 7 years old, to which my attention was called on second visit; sick five days. This child's bowels had not moved for three days. I gave a mild cathartic of calomel and soda bicarb., and followed with 2 grains salol, every four hours. Temperature when first seen was 105°, but it fell in three days to 101° in the morning, and 102½° in the afternoon. She took milk freely, and no bad or unpleasant symptoms developed. In that house all the children had the fever, and were treated with salol. There were six cases in that house, and eleven others, under entirely different conditions of life, treated with salol alone, till the period of convalescence set in, when general tonics were substituted.

Dr. Wm. Blake, of Attica, writes: "In respect to the salol treatment in typhoid, I have used the treatment solely in six cases, and was very much pleased with its action. Under its use the tongue became moist, temperature modified, diarrhœa controlled. I cannot say it has any effect in cutting short the disease, but I do believe it modifies it and renders the patient more comfortable. As a bowel antiseptic, it is probably the peer of any agent at our command."

Dr. S. A. Snow, of North Branch, writes: "In regard to my experience with the use of salol in typhoid fever, I would say that it has been limited to fourteen cases, all of which were treated during the months of October, November, and December, 1889. I found that I could control diarrhœa better with salol than with any other remedy I have ever used before. Where the passages numbered from 10 to 12 per day, it would reduce them to three or four, and where the tongue was coated, of a brown color, dry and hard, it would change to its natural appearance in from 36 to 48 hours. With but one exception did I have any trouble with dry tongue or diarrhœa. That was in a young man about 25 years of age, who was taken very severely at first, had several attacks of hæmorrhage in third week, perforation at end of third week, peritonitis, and death in 24 days. Even in this case it would control diarrhœa for three or four days at a time, then it would come again. I did not think it had any effect on the temperature or circulation."

Lapeer, Mich.

THE DIGESTIVE DISORDERS OF URÆMIA.

BY DR. E. LANCEREAUX.

Physicians have long maintained the frequency and gravity of renal affections. The mortality of the kidney is certainly great, and will be seen to be greater still if we take more particular account of the pathological rôle of this viscus and its predominant intervention in the complex morbid states of other organs. Thus it is that there are multitudes of patients, sufferers from heart disease, whose lives are really endangered by little else than a renal lesion concomitant with generalized chronic arteritis.

The kidney almost always kills by uræmia. This syndrome is to diseases of the kidney what asystolia is to diseases of the heart. It denotes functional insufficiency of the organ, and may be compared to the grave icterus which, clinically, stands for destructive alteration of the hepatic cells.

To understand the mechanism of this disorder, we must refer to the principal data which we possess respecting the intimate phenomena of nutrition.

Physiologists agree in defining nutrition by the terms, assimilation and disassimilation. The first consists in the fixation by the tissues, at the expense of the materials elaborated by the digestive tube, of the principles necessary for the repair, growth and function of all parts of the organism: These principles are incorporated with the anatomical elements; are oxydised or broken up, hydrated or dehydrated—the nature of the

chemical and dynamical operations being as yet but imperfectly known. But this series of transformations and exchanges leads, in every case, to the rejection of products that cannot be utilized; to the separation of veritable organic waste-elements. It is to this second act of the nutritive movement that the name of disassimilation is reserved. The destiny of these excrementitious materials, the greater part of which are noxious and toxic, is variable. Some of them are almost immediately reduced by the oxygen of the blood, and the importance of a good pulmonary hæmatosis in the uræmic is evident enough. Others, such as retrograde albuminoid substances, undergo in the liver, without doubt, secondary modifications which reduce them to the state of urea; but in the end all have to be eliminated.

For this purpose, the organism makes use of several emunctories, the skin, digestive tube, lungs, and, above all, the kidneys. If the disease effects the suppression of any or all of these depurative processes, the waste-products of nutrition, toxic or indifferent, accumulate in the humors and in the tissues. It is to the sum of the accidents caused by this abnormal retention of excrementitious materials, that the name uræmia should be applied. Usage has consecrated this old term.

But the term comprehends still more. It will not merely suggest the notion of an accumulation of urea in the blood, or of an accumulation of the urinary excretion in general. It includes the larger conception of an auto-intoxication by retention of products normally destined to be excreted, whatever may be the organ primarily affected. There is, in fact, besides renal uræmia, a uræmia of cutaneous origin, and, it may be, of pulmonary or digestive origin, only the latter disorders have been but imperfectly studied as yet.

On the kidney devolves the principal rôle in the depuration of the organism, and it is only renal uræmia that we shall study to-day.

The skin, the lungs, the intestines, have but a secondary rank as surfaces of elimination. But if the renal filter becomes insufficient, it is on these other emunctories that the depurative function devolves. If they are sound, a vicarious action is established, and the accidents of renal uræmia are often staved off by the fact of a spontaneous curative process. At any rate, the physician may apply himself to these emunctories and promote excretion thereby, to the advantage of the damaged kidneys. On the other hand, if these organs cannot lend themselves to derivation, if age or disease has damaged them so as to restrain their function, the danger of renal insufficiency increases with the insufficiency of other emunctories.

We know the disorders which follow in animals the experimental application of an impermeable varnish over the whole extent of the external tegument. Certain cutaneous affections realize similar conditions. But in such cases the disturbances almost always pass unperceived, as the suppression of the cutaneous affection is incomplete, because it takes place progressively, and because the kidneys are healthy and easily do the additional work. If the study of uræmia of cutaneous origin is still undeveloped, we know at least that affections of the skin in renal uræmia render the latter an evil of greater magnitude than it would otherwise be. Atheromatous old men, affected with renal sclerosis, have at the same time a dry thin skin with atrophied glands, and the subdermal vessels rigid and contracted. Often the digestive mucous membrane and the lungs are at the same time degenerated. Hence the uræmic accidents are repeated again and again, and these patients are less amenable to treatment than children whose skin and intestines functionate well.

These few preliminary remarks are necessary in order to explain different forms of this kind of poisoning.

The excrementitious substances not eliminated, act upon the nervous system as do certain vegetable or mineral poisons; whence a first class of uræmic accidents called *cerebro-spinal uræmia.*

These same toxic principles, by a spontaneous effort of the organism, seek elimination by certain emunctories capable of supplying the place of the diseased kidneys. The conditions of secretion from these surfaces are consequently violently modified by the irritation of the toxic substances; and thus are explained the various bronchial, cutaneous, and other lesions of uræmia.

The principal derivative effect is produced upon the digestive tract. The discharges which are poured out along this tract are almost always sufficient to determine functional disorders of extremely grave character.

The experiments of Claude Bernard and Barreswill have shown that in nephrectomized dogs, the urea is eliminated by the stomach and intestine under the form of carbonate of ammonia, and that this elimination is accompanied with profuse vomiting.

It is not necessary, as has been asserted, to suppose œdema of the digestive mucosa, to explain the gastro-intestinal disorders of uræmia. Furthermore, there are many dropsical cases which do not present any like symptoms; and these disorders are seen in uræmic patients when there is no trace of œdema, and finally, their supervention often improves the nervous symptoms, which shows that we have here to do with a natural curative process.

The aggregate of these phenomena characterizes the second form of uræmia, the *gastro-intestinal.*

In this form of uræmia, the more special seat of the disorder is the stomach and large intestine. But it is localized, sometimes in the small intestine, and even in the mouth and pharynx.

Bucco-pharyngeal uræmia has not been described in Bright's disease, for cases are not common. However, I have observed, both in the city or hospital, several which removed all doubts as to the existence of this symptom.

A man, 55 years old whom I treated more than three months for an affection of the kidneys with cardiac hypertrophy, had suffered several attacks of dyspnœic uræmia, when he refused to eat, rejected all food and drink, and became generally prostrated. At the same time, the mucous membrane of his mouth and pharynx were covered with mucous, thick, greyish, semi-transparent, abundant, and so viscid and sticky that it was necessary to remove with the fingers in order to prevent obstructing the digestive and respiratory tracts. The pa-tient was almost always drowsy, had lost all appetite, and I was several times on the point of using the stomach tube to feed him. For eight days, during which this state lasted, I was often obliged to remove from the mouth and pharynx, handsful of mucosites which bore a certain resemblance to the membraniform products of pultaceous pharyngitis. After that, the patient roused from his torpor and decided to take food. I commenced to feed him a little, and the symptoms diminished. He died later in an attack of uræmic coma.

I have found in other cases of uræmia, bucco-pharyngeal symptoms, characterized by the presence of this adherent and glutinous mucous. When this is detached, the mucous membrane beneath is found to be red and dry, but not ulcerated. In one case I saw a well known physician confound this with pultaceous angina. But, in this angina, the false membranes are less abundant and whiter, moreover the general symptomatology of the disease has no resemblance to that of buccal uræmia.

It is important to know how to recognize this complication and to refer it to its proper origin. But how do you explain its rarity, and what is the condition of its origin? Can it not be the elimination by the salivary glands of a considerable proportion of excrementitious material. This is a hypothesis which seems likely, but it can only be proved by comparative analyses of the saliva, and by ascertaining what is the peculiar chemical agent which can thus modify so strangely the state of the mouth.

Apart from these rare cases, we habitually observe that the tongue of the uræmic is red on the borders and covered at the centre with a grayish or yellowish fur. It does not become dry, black and horny unless the uræmia is accompanied with suppuration of the urinary passages. If the preceding type is rare, gastric uræmia is very common. A few days ago, I stopped in the ward at the bedside of a young woman suffering from typhoid fever, whose spittoon was half-filled with a greenish liquid which she had expectorated. Recognizing in this liquid the characters of uræmic vomiting, I immediately had the urine examined, and found in it an abundant precipitate of albumen. The patient complained of a headache and of a dyspnœa of quite special aspect. We had before us, in fact, a case of uræmic poisoning, due, without doubt, to an attack of epithelial nephri-

tis, a quite frequent complication of typhoid fever. The therapeutic indication presented itself clearly, and by dint of a few diuretic pills, aided by milk diet and purgative lavements, the patient got well without any drawback.

In chronic nephritis, where gastric uræmia is daily observed, the supervention of vomiting is preceded by want of appetite. There is disgust for certain kinds of food, as in particular for meat; then comes on the vomiting. Rarely preceded by nausea, the vomiting is easy, demands little effort, and is abundant, as in cerebral and meningeal affections. The matters vomited are not alimentary, and the patient gets up much liquid at a time—half a tumblerful, a wineglassful at the most. The matters vomited are liquid, grayish, like dirty broth, not porraceous, as in peritonitis. These characters are always the same, and are almost pathognomonic of uræmia. The vomiting is persistent, and is repeated several times during the same day, and for several successive days. It generally ceases of its own accord, or under the influence of a simple laxative enema; and this is, without doubt, owing to the blood being cleared of the excrementitious matters which encumbered it; in fact, it is probable that the stomach often acts the part of a safety valve, which rises at a certain moment to allow an excess to be got rid of.

What is the nature of these vomitings? In the first period, they represent simply an exaggeration of the natural secretion, brought about to make up the deficiency of the renal function. We thus witness a clinical realization of the famous experiment of Claude Bernard, and the vomited matters contain an excess of urea and carbonate of ammonia. But later, under the influence of a prolonged irritation by the excrementitious substances, the gastric mucous membrane is profoundly modified. It becomes the seat of lesions which in their turn condition the vomiting. This is a distinction which is indispensable to therapeutics. The vomitings at the onset should be respected as the index of a natural curative effort. Later it may be necessary to moderate the vomiting.

I cannot forbear thinking the nervous system sometimes intervenes to cause the vomitings, for they are frequently accompanied with hiccough, bulbar dyspnœa, and other cerebro-spinal phenomena. Moreover, I have pointed out the analogies which connect these evacuations with cerebral and meningeal vomitings.

It is important to be settled as to these vomitings and their origin, if we would avoid serious clinical mistakes. During the first year of my internat at Pitié Hospital, I often diagnosed as cancer of the stomach, or chronic enteritis, cases which the autopsy proved to be atrophic degeneration of the kidneys; so that afterward, whenever one of my colleagues came to me with a doubtful case which had failed to respond to all the pathognomonic conditions of gastric cancer I insisted on an examination of the urine and we generally found the kidneys profoundly altered, granular and atrophied. It was so even with cases which had been diagnosed as chronic enteritis. Since then I have often seen the same mistake made, though the phenomena of uræmic poisoning are better known to-day. It happens often enough even now, that inexperienced physicians treat patients for stomach complaints, whose kidneys are becoming sclerosed, and whose gastric symptoms are referable to uræmia.

Diarrhœa is the revealing symptom of intestinal uræmia. This diarrhœa often comes on without being preceded by pain or colic, and though in some cases it may not be abundant, it exhausts the patient very little or not at all. Moreover, it favors sleep, and tends to the relief of existing headaches, so that often it may be considered beneficial. The rejected matters, ordinarily abundant, serous and fœtid, grayish in color, contain, in greater or less quantity, white or rice-like lumps, which look like the spawn of frogs. These characteristics, like those of the vomited matters, are sufficient to lead the physician to a diagnosis of uræmia. These evacuations contain an excess of urea and ammonium-carbonate, the latter resulting from transformation of urea in the intestine. These are the only excrementitious principles, the search for which has been carefully made, down to this time; these investigations should be continued till other toxic principles concerned in the pathology of uræmia shall be discovered.

At a more advanced stage of the disease

he diarrhœa changes its character, and from erous becomes dysenteric; modifications ake place in the intestine identical with vith those we have noticed in the stomach. The mucous membrane becomes at length ltered in its histological properties by dint of prolonged irritation, and typical lesions are produced whose seat of election is the arge intestine. By dint of the irritation which constitutes the hyper-secretion which, as we have seen, is depurative, are developed he symptoms of degeneration of the walls of he intestine.

To sum up, uræmic troubles may affect he different departments of the digestive ube together or separately. Bucco-pharyn-geal uræmia is rare; gastro-intestinal uræmia s of great frequency. When vomiting or erous discharges come on, they must be considered rather as a providential exag-geration of the secretion than as a morbid process; hence these evacuations should not be arrested unless some other way of deriva-ion be found.

The indication in such cases is to act en-rgetically on the skin, to restore the action of the kidneys, and not to endeavor to re-train the evacuations until a equilibrium be stablished through some other organ. If ou stop these discharges prematurely, you un the risk of seeing convulsions or coma eplace the suddenly suppressed diarrhœa.

On the other hand, the diarrhœa and vom-ting which supervene at an advanced stage of the disease, when matured lesions are ffected in the digestive mucosa, may be ombated, if they are too profuse. I do not lare, however, to give opiates save in excep-ional cases.

There remains for consideration a last ymptom which would find its place as well nder the symptomology of cerebro-spinal ræmia as among the phenomena of diges-ive uræmia; I refer to *hiccough*. This ymptom has for its starting point the tomach or nerve centre. It often appears n the train of uræmia, and this sometimes is ccompanied with vomiting, sometimes with nore or less intense attacks of dyspnœa. It s remarkable for its violence and tenacity; ometimes lasts hours, sometimes days. It s almost always of evil augury.

Paris, France.

ONE DAY WITH THE VILLAGE DOCTOR.*

BY CHAS. S. COPE, M. D.

The general practitioner is a specialist in every department of medicine. He must be abreast of the times and ever ready to treat promptly and successfully every case that may present itself to his notice.

While the surgical pendulum is swinging far past the centre, on towards the limit of its vibration in the unattainable, and every doctor now seeks to be a surgeon of renown, and we are solicited on every hand to notice the long list of successful operations being performed daily by our brethren of the knife and saw, it may prove refreshing to step aside from this grand procession and, seeking the humble walks of professional life, spend one day with the village doctor, whose sole aim is to do good, and who seeks neither fame or station. Let us go with him on his daily rounds, notice his way of doing business, listen to the instruction he gives his patients, and look over his shoulder as he prescribes.

We may find some of his prescriptions worthy of preservation, some of his methods worthy of adoption.

His first call is in the early morning. A messenger in breathless haste announces that Mrs. K. had by mistake given the baby turpentine instead of castor oil. While his hands are busy with a hasty toilet, his mind is also busy sweeping the broad avenues of the materia medica, where poisons and antidotes arise as apparitions at his command. As he takes down his medicine case, we see the doctor take from the shelf a bottle of olive oil. In a few moments he stands before his patient, a child of six months. The mother had been up with the child all night, as it had been suffering for several days with a heavy cold, and grown worse in the night. She at last had bethought herself of the castor oil, and, in seeking to give the child a dose of this medicine, by mistake filled her spoon from a bottle of turpentine that stood in a similar bottle on the same shelf. The quantities of phlegm that had accumulated in the child's throat and stomach served to parry this heavy stroke inad-

* Read before Michigan State Medical Association, June 12th, 1891.

vertently aimed at its little life. There had been vomiting, and most of the turpentine thrown off, but the burn and irritation remained. The mouth and throat were blistered, and the babe in agony. It is given a half-teaspoonful of olive oil at once, and this is repeated in five minutes, and so on for half an hour; vomiting continues from time to time, but the oil is soothing, and with the burns on the face and lips covered with a thick paste of saleratus and water, the child grows easier and rests quietly. Directions are left to give a half-teaspoonful of the oil every half-hour till the bowels are moved freely, when the child will be out of danger.

The following prescription left for the mother's use in the further care of her child, for restlessness and nervousness, will be found of great service. Containing neither opium nor chloral, it can be given to the smallest child without danger of serious consequence, and yet attended with soothing, quieting results in every case:

℞ Oil anise, ♏ xxv.
Alcohol, ℥ ij.
Fl. ext. valerian., ℥ j.
Oil menth. pip, ♏ xv.
Tr. camphor., ʒ ij.
Fl. ext. liquorice, ℥ j.

M. S.: Shake the bottle.

Dose—One-fourth to one-half teaspoonful in water; repeat as needed.

For the cough, one grain muriate of ammonia in half teaspoonful of glycerin, every three hours.

As the doctor steps into the street, he is hailed by a clerk on his way to open his employer's store, who says: "I wish you would give me something for my cough. It kept me awake nearly all night by a continued tickling and irritation in my throat. I don't raise much, but am sore all over from coughing so much." The following prescription is written:

℞ Tinct. opii, ʒ j.
Fl. ext. lobeliæ, ℥ ss.
Fl. ext. yerbæ santæ,
Fl. ext. grindeliæ robustæ, ää ℥ ss.
Chloroform, c. p., ʒ ss.
Syr. scillæ comp., q. s., ℥ ij.

M. Shake the bottle and keep well corked.

Sig.—One drop on the tongue; repeat every five minutes, till the cough is better.

We are glad to see a bright half-dollar come out of the clerk's pocket and go into that of the doctor.

Passing on, he hears a great outcry as he nears a boarding house, and some one calls: "Run for the doctor, quick;" but he is at hand, and goes within. A child had been playing near the stove while the breakfast was in preparation, and succeeded in depositing on its abdomen part of the contents of a dish of hot gravy. The result is a blister as large as a man's hand, extending from umbilicus to epigastrium; child is two years old. Its writhings are very similar to convulsions, its screams arousing every one in the house. The doctor, cool and collected in that Babel of confusion, takes from the shelf an unbroken package of saleratus, pours half of its contents into a tin wash dish, adds enough water to this to make a thick paste, and covers the burn with the mixture, making the application half an inch thick. As soon as this is applied, the child stops crying and is free from pain. Leaving orders to keep the child quiet all day, and not to allow the soda to become dry for eight hours, he quietly leaves the room. As he passes through the hall, a lady calls from the stairway for him to come to room No. 9. Here he finds a lady who had been confined three days before, in whom the flowing had ceased for several hours and she was suffering considerably. The nurse had used injections and had exhausted her resources, but to no purpose, and as there was a slight rise of temperature, she feared puerperal infection and fever. The doctor tells her to prepare a thick poultice of pulverized aniseed, and apply this to the vulva as hot as can be borne, and renew when it becomes cold. This will, in a few hours, have the desired effect.

A few hasty strides and he reaches his own home, where breakfast awaits him. It will be no breach of etiquette to see of what he makes his morning meal. Good bread and butter, rich milk, thick cream, fragrant coffee, rolled oats eaten with butter and sugar, constitute the repast. He is not made "logy" by meat, nor dyspeptic by pastry, but with his stomach filled with easily digested nutritious food, he goes about his work not realizing that he has such an appendage as a digestive apparatus.

Immediately after breakfast, in accordance with a fixed and proper habit, the promptings of Nature are heeded. The wisdom of the maxim: "Always trust in God, and keep your bowels open," is manifest in the life and works of our friend.

The bell of the telephone has been jingling some little time, when he lowers the trumpet and notes down the calls that come from distant points.

With elastic step he reaches the home of his first patient, a lady of 60 years, who is thin and nervous, anæmic and dyspeptic; habitually constipated; subject to severe and frequent headaches. Her diet is mostly bread, potatoes, and tea; she has a weak, irregular heart; pulse jerky and intermittent. For this condition of the heart she is ordered to take, night and morning, 10 drops of the fluid extract of cactus grandiflorus. From the words of praise that comes to the doctor every day in regard to this "heart medicine," he is encouraged to continue its use. As an aid to the digestion, she is given a prescription for the extract of malt with pepsin and pancreatin, to be taken in teaspoonful doses, with meals.—If the useful effects of malt were better understood by the profession, it would be more largely used than it now is.—As a tonic she is given this prescription:

℞ N. F. 370, ʒ vj.
Sig.—One teaspoonful before each meal.

This is almost the same as Fellows' syrup of the hypophosphites. It can be prepared by the local druggist. Every physician and every druggist should have a copy of the book of formulæ, published by the American Pharmaceutical Association, known as the National Formulary. From this the doctor has received many useful suggestions in prescribing, and made many friends by reason of palatable prescriptions that he has found in this collection of formulæ.

The next case is one of chills and fever, in a child of 12 months. It needs a cathartic and it needs quinine.

For the first is written:

℞ N. F. 382, ʒ iv.
Sig.—One teaspoonful twice daily till bowels are regulated.

This is the comp. syrup of senna, containing senna, rhubarb and frangula, and is an admirable laxative for children.

The prescription for the chills is as follows:

℞ Quinine sulph, ʒ j.
N. F. 54, ʒ iv.
M. Sig.—One teaspoonful every three hours.

This is made from yerba santa and is a complete mask for bitter tastes. Children take this and cry for more. The physician who uses this will have many friends among the children, and the praises of the mothers as well.

Word is brought that a child had fallen from a tree and broken an elbow. On examination a fracture of inner condyle of humerus, with partial dislocation of elbow with angular deformity is discovered. By manipulation, the fracture is adjusted and the dislocation reduced. Cold application is made to the joint by first wrapping it in flannel and around this is passed several coils of small rubber hose. One end of the hose is secured within a large pail containing cold water, the other end enters a receiving pail beneath the couch. By syphoning the water through this tube the local effect of cold is applied to the joint without the annoyance of wet clothing that would result from the application of water or ice applied directly to the parts. By proper use of this, the swelling and pain that so frequently attend such injuries can be very effectually controlled.

But what is most interesting to us in this case is the very peculiar splint the doctor provides for this injury. It looks as though it was made of cloth, but on handling, it is found to be as hard as a board.

The way this is made is as follows: Dissolve, by aid of heat, one pound of gum shellac and one ounce of borax in a pint of best alcohol. Cut from heavy cloth (the size and shape needed), perforate or make pores by means of a shoe punch, if desired. Also render antiseptic, if need be.

Now on this cloth spread a thick layer of the shellac mixture. Dry it quickly into the cloth, add another layer of shellac and heat it in; repeat this till the meshes of the goods are filled. It is now ready for use. Warm the splint so as to make it easily bent, and then apply gently to the injury. By careful handling it can be moulded to any joint at any angle, even if swollen and painful. After moulding gently to the parts, it takes

an impression distinctly of every protuberance and depression. In a few moments it sets or hardens into an immovable splint. It is now taken off, as it but encircles one-half or two-thirds of the posterior surface of the joint; being lined with thin, absorbent cotton, it is replaced, and a light roller bandage applied to hold the splint in place. The sleeve (ripped in the seam at the wrist) is pulled down over the splint, and with a large safety pin made fast to the clothing over the breast of the child. When we find that the bandage, splint, and sling are completed and thus adjusted, the child can walk about at pleasure without danger of harm to the joint. When necessary the splint can be removed and passive motion of the joint made. As swelling subsides, or, if necessary, changes in angle of flexure are made, they can be accommodated by warming the splint and moulding it to the limb in its new position and reapplying. This form of splint will be found useful in fracture of the lower jaw.

The next case is one of "the Grip." Temperature 103°; respirations 36; pulse 60; headache intense—head feels as big as a barn; can't take a long breath; short, dry cough; lungs congested; pain in legs and back; frequent desire to void scanty, high-colored urine; bowels constipated; tongue coated heavily, with deep red transverse cracks; great thirst; nothing tastes good. Patient is a man of 30 years. The doctor places on the patient's tongue a tablet containing 1-50 gr. nitro-glycerin. In a few moments it dissolves, and is absorbed. The feeling of largeness of the head is intensified for a few moments, and then rapidly vanishes; the breathing becomes easier; this remedy often acting like magic in dispelling lung congestions. He is now given 25 grains of acetanilid, at one dose, to be followed in four hours with a Seidlitz powder; Seidlitz powder to be repeated every two hours till the bowels move freely. Acids and cold drinks strictly forbidden for 24 hours. Hot milk in teacupful doses ordered every three hours. As long as fever and headache continue, 5 grains of acetanilid are to be taken every fourth hour; alternating with this 5 drops of fluid ext. gelsemium are to be given in water, and continued until the action of the kidneys become normal. Before leaving the patient, the doctor puts 10 drops of the tincture of nux vomica into a glass of water, saying, "Stir this well, and give him a teaspoonful every hour, if he has pain or soreness in the bowels following the action of his cathartic."

As he passes through the hall, he is asked by a domestic in the family, to prescribe for her. She is a large woman, of Bohemian descent, about 40 years of age, the mother of one child, now about 16 years old. She complains of a lump in her breast that is sore and painful to the touch. It has been growing for several months, but she refrained from calling a doctor for fear she would be told it was a cancer. When first noticed it was not as large as the end of her little finger; it is now as large as her thumb. The pain is of a sharp, stinging kind, paroxysmal in character. She can't bear her clothing to touch it, and has been obliged to leave off her corset for a long time. The shoulder and arm is lame, and she has some pain under the arm. The doctor finds, on examination, a hard, movable, sensitive tumor, deeply imbedded in the right mammary gland, an inch to the upper and outer side of the nipple. The following is ordered: One drop of the fluid extract of poke root (*Phytolacca decandra*), to be taken three times a day. If we could see this case in three months, we would find the lameness of shoulder and arm all gone, the tumor reduced more than half, its sensitiveness abolished, and the pain in axilla removed. She would be wearing her corset again, and able to pursue her work as usual. By continued use of this remedy, the doctor has removed many tumors from the breasts of ladies who must otherwise have had to resort to the knife of the surgeon.

A call comes from a row of tenement houses, where the sanitary surroundings are bad. Here are three children, less than a year old, all suffering from entero-collitis; vomiting, purging, restless, moaning, high fever; back of head very hot; outlook bad. Step near and see what is done. Calling for a glass of water that had previously been boiled, he places therein a tablet containing 1-100 grain of the arsenite of copper. When dissolved, a teaspoonful is given to each

child; this dose is repeated every ten minutes for an hour; after this one dose every hour till the bowels are better. This remedy is destined to take an important place in the treatment of enteric troubles, both acute and chronic bowel troubles yielding to its influence in these ridiculously small doses. But why should we question this, when we are prescribing Fowler's solution in drop doses, or bichloride of mercury, 2 grains to a quart of water, as a sure germicide? For the fever in these cases, one-half drop tr. aconite every two hours. For heat in back of head, 5 grains of bromide of potassium every fourth hour. For weakness and prostration, 5 drops of brandy every half hour. Careful directions as to diet, nothing allowed but Swiss condensed milk (as they are all fed artificially); no water allowed but that which has been previously boiled. To sweeten the air of the rooms and to render wholesome the atmosphere of the vicinity, Platt's chlorides are ordered to be used freely all over the premises.

But other cases need attention. Here is a child with capillary bronchitis and a double inguinal hernia. Child is five months old. Every effort at coughing only makes the already distended scrotum more prominent. A flaxseed meal poultice is at once placed around the child, completely enveloping the chest from chin to stomach, held high in place by straps over the shoulders, the pattern for the poultice cloth being one of the child's waists, cut so that it comes up well under the arms. Without especial care, nearly every such poultice placed on a child assumes the form of a surcingle, acting as a cold, damp zone around the body, and is found on examination to be resting snugly over the abdomen; but made thin and properly applied and secured, then covered outside with warm flannel, it proves a source of comfort, and a curative agent. For the fever, one-fourth drop tincture of aconite is to be given in water every hour. For cough, the following:

℞ Ammon. carb., ʒ j.
Glycerin,
Syr. bals. tolut., ää ʒ ij.
M. S.—Half teaspoonful every two hours.

In passing, we note that in every prescription the doctor uses glycerin in place of simple syrup, as it prevents rather than produces acid fermentation in the stomachs of children. Brandy is given in 5-drop doses every hour till better. The hernia next requires attention. Careful taxis is made; the head and shoulders meanwhile being lowered by lifting the feet and limbs to an angle of 45° to 90°, inverting the body, and allowing the force of gravity to carry the bowels far within the abdominal cavity; the hands of the doctor are placed over the inguinal rings and held there till the following simple, but effective, truss is applied: To a flannel band, long enough to pass once and a half around the child, and about five inches in width, are fastened two square bags of unbleached muslin, filled with fine sand. These bags are 1¼ inches square, and serve as the pads of the truss. Between the pads and the skin a thin layer of absorbent cotton is interposed; then, when all is in place, drawn snug and fastened with safety pins. An elastic tape can be secured before and behind, passing between the thighs. This is a simple and complete device for the treatment of inguinal hernia in children. Instructions are given to keep this truss constantly on the child for two years, never allowing the bowels to protrude; care also being used to prevent chafing. In the hands of a mother of common sense, this will prove a success every time, as the doctor has often demonstrated.

It is now far past the noon hour. The people where he is, give him a dinner of roast meat, potatoes with gravy, water for drink, rice pudding for dessert, with fruits. A few moments are spent over the daily papers, and he is away again to see a patient who lives at some distance.

This is in the factory district, where quite a clinic awaits him.

A child has a large glass bead up its nose, and quite a crowd of women are assembled. The doctor places the boy on a chair, with head well thrown back, and the mother is told to place her mouth on the child's mouth and to blow as hard as she can, the doctor holding his finger on the nose so as to completely close the nostril opposite the side where the bead is. After some demurring on the part of the boy, and hesitancy of the mother, the attempt is made and fails; but,

on finding that the bead is nearer the outlet of the nose, she tries again, and the bead goes bounding over the floor, while the mother seeks a kerchief to remove the debris from her face.

A storm of applause follows, and when it subsides, several women come to the doctor for advice. A young mother says: "I wish you would give me something for my baby. I can't say that he is sick, but he worries all the time, and I can't do anything with him. He won't nurse, and yet he seems hungry all the time, but the moment he takes the nipple he pushes it away and cries." The baby is carefully examined and handed back to the mother:

"Madam, you are to blow into this child's mouth and clear out the nostrils, just as this lady blew the bead from her boy's nose. The nose is filled up away back where you could not reach it with your hair-pin." After some nervous hesitation on the part of the mother, the trial is made and quite a quantity of mucous blown out. This is repeated several times, when the child is given the breast, and, seizing it with all the avidity of starvation, takes its fill of nourishment, not letting go until it falls asleep.

Another woman presents her babe. It has a cold and a very hard cough that the cough medicines fail to relieve. The cough is loose, and the paroxysms violent and exhausting when they occur. The same plan of clearing the air-passages is advised, and tried, as the child is beginning to cough. When the air-passages are thus cleared, the coughing ceases. The cough was caused by the catarrhal accumulations dropping back into the throat and tickling and irritating the pharynx. She is advised to watch the child, and, when it begins coughing, to clear out the air-passages in this way, and that she will thus accomplish more than by cough medicines. The doctor is heard to remark: "If physicians, nurses, and mothers only knew how much comfort they would afford the children under their care by this simple procedure, they would adopt it at once."

Another woman says: "My boy had the croup last night, and we are afraid he will have it again to-night. Can't you give something to keep it off?"

The following is written:

℞ Quinine sulph., gr. xxxij.
N. F. 54, ℥ j.
M. S.: Shake the bottle.

Give one teaspoonful at 4 P.M. and one teaspoonful at 8 P.M. till better.

Four grains of quinine at a dose, as above, will, in most cases, abort a case of ordinary croup.

A young lady comes to the doctor and says, in a whisper: "I want something to restore my voice, as I am to take part in a church concert to-morrow."

She is given:

Carb. ammon., gr. j.
Chlorate potass., gr. v,
Sacch. alb., gr. xx.
Aqua, ℥ j.

A dose this size to be taken every hour till better.

Another miss, whose face is covered with comedones and erythematous eruptions, asks for help. She is given Fowler's solution—ordered to take one drop after each meal for a month. After removing the blackheads by pressure, she is to bathe the face three times daily with the best C. P. peroxide of hydrogen.

And here is a young man who has had to lay off because "he has so many boils."

One teaspoonful of tincture of arnica is put in a tumbler of water, with directions to take one teaspoonful every hour. He is also given one dozen 2-grain pills of sulphide of calcium, with directions to take one after each meal till he can taste rotten eggs.

And here is an old case of varicose veins. Has worn a muslin bandage and used iodoform and vaselin. A new elastic flannel is to take the place of the old bandage, and aristol to supplant the iodoform.

And here is a case of sore eyes. They say: "He has wild-hairs" (whatever that may mean). Examination reveals a severe conjunctivitis, the result of cold and exposure. Orders a tablespoonful of Epsom salts in half a glass of water, to be taken at once; repeat every second day till better. In a clean earthen dish one half drachm of boracic acid is placed, and dissolved in a pint of hot water. He is ordered to sit by this bowl and to make constant and continued applications of this hot water for half a day at a time, and to continue this till the redness is all gone, and to keep the water hot all the time.

Again the doctor talks to himself, and we hear him say: "If people only knew how much good is to be derived from water, both hot and cold, there would be a less number of calls for the medical man."

But he has not long to moralize, for an emergency has arisen that will tax him severely. He is called to a child that has had convulsions, and has now been in a fit for an hour. The ladies in attendance have had it in a hot water bath, with cold to the head, for nearly that length of time, and yet it relaxes not, but, rigid and stiff, seems in *articulo mortis*. It takes but a moment to apply to its nostrils a bottle of amyl nitrite; an inhalation or two relaxes the spasm, and now chloroform is used as an inhalant. The child is ordered to be removed from the bath, wiped dry and wrapped in warm flannels. The doctor calls for a long, stiff feather, and with this he clears out the phlegm and accumulations in the throat. The jaws are pried apart, and held so by a lead pencil between the molars. The feather is pushed down the throat and twisted slowly around, and removed, wiped, and returned, and this repeated many times to clear out the passages and to excite vomiting, if possible. And now 5 grains of sulphate of zinc, in a teaspoonful of warm water, is forced down the throat. The rapid whirling of the feather is again introduced into the throat to assist the efforts at vomiting, and soon the contents of the stomach are ejected, the spasmodic action removed, and the child assumes natural composure and quietly falls asleep. Leaving orders for perfect rest and quietude for the next six hours, the doctor takes his leave.

By this time it is past sunset, and on reaching home he finds a bowl of bread and milk (which is his simple repast at night) awaiting him. When this is partaken of, he spends an hour in his study with the medical journals. These read through or glanced at (his quick eye catches from a page just the best grains and seed-thoughts), he turns to his accounts, and from weariness nods over his ledger. In a moment he rouses and seeks his couch, and there we leave him, wrapped in the embraces of "Tired Nature's sweet restorer, balmy sleep."

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

HYGIENIC MANAGEMENT OF INTESTINAL DISORDERS OF INFANTS.

It is needless to say to physicians that attention to apparently insignificant details may decide the balance between life and death in many cases of summer complaints.

More important than medication in these cases, is the recognition of the existing conditions and environment of the individual case, and the removal of causes operative in perpetuating the intestinal disturbances. In this connection we quote some sentiments as to the management of infants, from a recent work,* which are regarded as eminently worthy of consideration.

In a general way, we are safe in saying that nearly all the diseases of early life may be avoided if constant unremitting care be given the child. Proper hygienic measures; cleanliness; keeping the alimentary canal free from irritation; the skin in good shape; keeping open the secretions, the anatomical sewers so to speak, of the little bodies, from the very day of their birth on through each and every day of their lives; selection of diet; proper instruction as to the time of eating; protection against chilling of the surfaces; clothes proper for each and every season; all are of vital importance.

The child that is properly clothed can, from the very first month of its existence almost, live outdoors the greater part of the day-time, winter and summer. The well-fed child, whose diet is well selected, whose

* Practical Points in the Management of Diseases of Children," by Dr. I.N. Love, Professor of Diseases of Children, Clinical Medicine, and Hygiene in the Marion-Sims College of Medicine. Published by Geo. S. Davis, Detroit.

digestion is well performed, and breathes plenty of oxygen, rarely contracts disease.

Children should be taught to drink freely of water in health. There can be no doubt that the water drinker, whether child or adult, has a more active tissue change. The practice of denying the infant water is very general, but water could often be given with advantage to the comfort of the little one, instead of the usual resort, when infants are fretful, the breast or bottle.

With reference to the surroundings of the child, little ones have their æsthetic tastes the same as we have. The utensils used in the sick-room should be scrupulously neat and clean. Care should be taken with the linen. We cannot be too careful in all the various details that go to make up the necessities of the sick-room. As physicians, we can often help out the digestion of the little one under our care by thoroughly studying the artistic side of alimentation, and giving pointers to those who are helping us in our work.

It should always be borne in mind that every baby, like every other individual, is a law unto itself, and there can be no stereotyped rule for the artificial feeding of infants. Regularity, a proper regard for the component parts of the food, which should meet the necessities of tissue building, a due respect for the palate of the child, will in the majority of instances completely nourish even the most delicate child.

The food *par excellence*, which should be insisted upon and given during the progress of exhaustive disease, is Nature's ideal nutritive, milk. A better nerve builder than milk was never devised. If necessary, it may be given in peptonized form. Peptonization should be skilfully done, so that the milk be not heated sufficiently to develop a bitter taste.

So popular has the use of sterilized milk become in intestinal disorders of children, that dispensaries have been established in large cities, which supply sterilized milk for the use of hand-fed infants. These dispensaries design also to dispense special mixtures of milk, cream, lime-water, barley-water, etc., either plain or peptonized, these mixtures to be sterilized and given out in nursing-bottles, each to contain the amount directed for one feeding.

There seems to be, however, some diversity of opinion as to the clinical value of sterilized milk. In a paper read before the American Medical Association, Prof. A. R. Leeds concludes "that the sterilizing of milk destroys the starch-liquefying ferment normally present."

The process most likely to give good results is to render milk feebly alkaline with lime-water, then treat with pancreatin at 155° F. for five minutes; if not used at once, raise the heat to boiling for a moment. Dr. Davis' experience in the Philadelphia Hospital and Polyclinic indicates, that while infants fed on sterilized milk and treated by modern methods of intestinal antisepsis were relieved of acute gastro-enteritis, yet they were not *nourished* by sterilized milk; they frequently suffered from obstinate constipation, and their bodies presented after death appearances characteristic of atrophy of the digestive tract.

If milk be used, to simply boil it destroys the possibility of infection. Where sterilized milk is not digestible, it may be necessary to modify the milk by the addition of barley-water, or by some farinaceous article.

It may frequently become necessary for us in the management of a case of infantile, gastric, and intestinal trouble, to stop all milk food, and we find advantage in so doing; in such cases the administration of animal broths is indicated. The expressed juice of a rare and tender steak, warm and gently salted, will many times be retained and assimilated when other food is rejected.

Mosquera's beef-meal, if given in a more or less thick soup, will be taken by a child with avidity, even if quite young. Of course, the quantity should be regulated, according to the delicacy of the stomach. In children of larger growth, it may be mixed with porridge, or given in chocolate.

To control the temperature, the bath is the proper resort. The best method to follow is to immerse the child in water of the temperature of the body, or even warmer, and then reduce the heat gradually. It should be kept in the bath sufficiently long to bring the temperature down to a reasonable degree. To some little patients the bath is grateful and conducive only to good. To others the bath is demoralizing, and rather

than subject the little one to the nervous excitement incident to immersion, it is better to administer febrifuges internally. The bath should be administered with due regard to the comfort of the patient; drafts should be avoided, and immediately following the bath, a thorough drying and brisk rubbing of the surface should be instituted, and warm covering with hot-water bag to the feet, if need be, and a cup of hot broth given.

IS MORPHINE CONTRA-INDICATED IN RENAL INSUFFICIENCY?

In Bright's disease, whether of the parenchymatous or interstitial kind, the time comes when the kidneys become incompetent to remove all the waste materials whose excretion devolves on these emunctories, and when even medicinal substances which ordinarily pass out by the kidneys are insufficiently eliminated. It might be inferred that in this stage of the disease the medicament being retained by renal failure would act with extraordinary power. There would be especial liability to accumulation of doses, and other emunctories would be irritated and inflamed. There are numerous observations which show that this inference is not unwarranted. Bouchard, in 1873 published two observations of mercurial poisoning, resulting in the death of two patients, the one suffering from interstitial nephritis, the other from parenchymatous nephritis, who had taken but small doses of the medicament. Claude Bernard has shown that in a curarized animal, if a double nephrectomy be performed, the elimination of poison no longer taking place, the animal succumbs rapidly. Charcot, Chauvet, Cornil, and others, have made similar observations, and Dr. W. W. Keen, of Philadelphia, has published a similar case in regard to opium poisoning.*

Naturally, then, the conclusion would be that the practitioner should be very chary in the administration of morphine to patients in whom he has reason to fear renal insufficiency.

Good medical authorities, however, do not share this fear of untoward effects from therapeutical doses, and Washburn, of Milwaukee, in the Medical News for July 11th, advocates the use of morphine for certain uræmic symptoms without regard to the question of the extent in which the kidneys are damaged. In his experience, morphine has proved not to be dangerous, but highly beneficial. It diminishes peripheral resistances by allaying spasm of the arterioles, hence relieves convulsions, cephalalgia, and dyspnœa. It "increases the general blood-pressure while relieving the constriction of the vessels in the kidney, thus increasing the urinary secretion." "When retention of urine follows the use of morphine, this results from the blunted sensibility of the bladder." Moreover, morphine "increases the excretion of urea;" Dr. Washburn quotes in this connection in substantiation, Sfubini and H. C. Wood. He declares that "neither in acute or in chronic uræmic intoxication,will morphine add to the dangers already existing, but that it will uniformly produce happy results."

There is reason to believe that this has been the experience of very many in the profession. The treatment of puerperal convulsions by hypodermic injections of morphine has become quite general, and, when conjoined with bleeding, seems to be fairly successful, if we may trust the recent articles in the Journal of Obstetrics; now the very existence of puerperal convulsions implies, at least in most cases, a serious interference with the renal function by acute nephritis.

"It will not do," says Lecorché, "to exaggerate the dangers of medicines in Bright's disease. Digitalis, mercury, belladonna, opium, may produce symptoms of poisoning in nephritic as in other patients. But apart from the extreme phases of the disease (the last period of the large white kidney or the small contracted kidney), when already, by themselves, the renal lesions have become incompatible with much longer survival, the danger is in the abuse, and not in the usage."

This same writer declares that in his own practice, whenever the indications for opium present themselves, he cannot consent, by reason of theoretical fears, to deprive himself of this powerful therapeutic agent. And

* Diseases of the Kidney, page 37: Dujardin-Beaumetz, Geo. S. Davis, Pub., Detroit.

in cases of cardio-uræmic dyspnœa, of restlessness and insomnia, he does not hesitate to resort to subcutaneous injections of morphine, which he often continues for eight or ten days in the dose of one-sixth to one-third grain, without ever having met with any ill result. The indications for opium or morphine are, on the whole, rather few in Bright's disease, and limited for the most part to the convulsions of acute nephritis, and to the nervous agitation and dyspnœa of the cardiac phase of the small contracted kidney.

A SYMPOSIUM OF OPINIONS AS TO THE CURABILITY OF BRIGHT'S DISEASE.

Apropos of the statements that have been made regarding the nature of the illness of James G. Blaine in the newspaper press, The New York World, May 26th, has obtained from many European physicians of note, expressions of opinion as to the nature, treatment and curability of Bright's disease. While there were no facts elicited which are not well established and commonly known by the medical profession, a statement of the general consensus of opinion of the authorities consulted may be of interest to our readers.

These include the following English, French, German, Italian, and Austrian physicias: Maclagan, Sir Morell MacKenzie, Sanuel Mills, Robert Cross, G. M. Timos, Sir Dyce Duckworth, of London; Dujardin-Beaumetz, Talamon, Bouchard, Germain Sée, M. Labadie-Lagravé, Emil Javal, of Paris; Lépine of Lyons; Piccinini, Arcangeli and Rassoni, Rome; Senator, Gerhardt, E. Leyden, of Berlin; Nothnagle, Schroetter, of Vienna.

The questions submitted were:

Is Bright's disease incurable?

If incurable, how long can life be prolonged after the development of the disease?

If curable, what is the latest-known cure?

Give instances of cures, if any, and such details as may be obtainable.

It is interesting to know that while there was much variety in form of expression among these authorities, there was unanimity in the conclusions reached. All were agreed that Bright's disease was not incurable, that life might be prolonged indefinitely after the establishment of the disease, that there was no specific medicinal cure, that there are various varieties of Bright's disease, that form resulting in contracted kidney being the most speedily fatal, those resulting in enlarged and granular kidney less so, and finally that dietetic and hygienic measures were valuable palliatives and sometimes curatives of this disease, especially in cases without heart complications.

The diet most generally commended was either exclusively milk, or if other food were allowable, those foods selected which put the least strain on the excretory function of the impaired kidneys. In other words, that the kidneys should, as it were, be put in a sling; alcohol, and highly albuminous foods like meat abstained from, as well as excitants of the circulation such as alcoholic preparations.

With rest from excessive work and general strain, strict attention to diet prescribed, avoidance of all causes unduly exciting the circulation and occasional resort to those medicinal springs which aid in elimination, life might be prolonged in many cases to a ripe old age.

A MORAL FOR MEDICAL WRITERS.

Dr. Geo. L. Brown, of Buffalo, sent a typewritten copy of an article entitled "The Duties of Physicians as Examiners for Life Insurance," addressed to the MEDICAL AGE.

As no letter of instructions regarding the publishing of this paper accompanied it, the editor of the AGE construed it to be one of many copies of Dr. Brown's paper, which had been sent to various other journals as well as the AGE, to secure a wide reading of the author's views on this topic.

Owing to the practical character of this paper, it was thought wise to give it editorial prominence. To this method of publishing, Dr. Brown takes exception.

While we have pleasure in giving Dr. Brown credit for his contribution, we may remark that this case illustrates the necessity of contributors to medical literature being more businesslike in their methods. Authors, we think, should not expect of editors an omniscient knowledge of their wishes. A definite explanation of them would be far more intelligible.

Book Notices.

THE AUGUST COSMOPOLITAN.

A cablegram announces that Amélie Rives has sailed for the United States, where she will arrive soon after the appearance of her latest novel in the Cosmopolitan. After nearly two years of silence, the new story of Miss Rives will be received with the greatest interest by those who enjoyed her earlier work. Married, traveled, and in every way matured, her latest production is said to be worthy of the talent which gave such great promise. The scene is laid in Paris, where the author has been living for two years, and the heroine is a Virginia girl who is studying music abroad, with a negro servant for a chaperone. The story has been illustrated by Kate Greatorex, one of the most promising of American painters in Paris, and a charming portrait of Miss Rives is the frontispiece of the magazine.

Two papers in this number which will be read with great interest by journalists, are those by Valerian Gribayedoff—who is called "the father of pictorial journalism"—and "The Woman's Press Club of New York," by Fannie Aymar Matthews. Gribayedoff has discussed artistically and practically the question of the illustration of the daily newspaper in a way to afford information to all who are interested in journalism.

Anent the baccarat scandal, Gen. Adam Badeau, of Grant's staff, who was afterwards Secretary of Legation in London and saw much of the English aristocracy, writes an article on "Gambling in High Life." "The Dukeries," by Pelham-Clinton, is another article which will please those who take an interest in the great country houses of England. Thomas A. Janvier, who is always delightful with his pen, gives a quaint sketch of the old ducal town of Uzes. To those interested in education, President Gilman of the Johns Hopkins furnished food for thought in an article on this great Southern university.

The cartoons which have been made of Bismarck, furnish a subject for Murat Halstead, reproductions of many of the most noted cartoons illustrating the paper. There is an article on Placer Mining, with instantaneous photographs, and one on the Court Jesters of England by Miss Esther Singleton, who is making a reputation as a graceful writer, besides the usual departments by Edward Everett Hale, Brander Matthews, etc.

MEMORIAL SKETCHES OF DR. MOSES GUNN. By His Wife. With Extracts from His Letters, and Eulogistic Tributes from His Colleagues and Friends. W. S. Keener, 26 Washington St., Chicago.

This semi-biography, which traces in a most charming manner the interesting events in the career of one of America's most illustrious surgeons, is before us—a worthy memorial of one who well deserved the tribute rendered by it.

The work is composed, to a large extent, of letters written by Dr. Gunn to his wife, in which are given in his own felicitous style the details of trips to New York, Philadelphia, and other of our own cities, and to Europe; of his acquaintance with and entertainment by the members of the profession in these various places, and the impressions produced on him by his *confréres*.

These letters, as the preface says, bring us nearer to the personality of the writer, especially as they were unpremeditated.

With their assistance, Mrs. Gunn gives us an insight into the different stages of his life —his boyhood at East Bloomfield, New York; his student life, academic and medical; his early practice, into which he introduced a bit of romance; his army life, which is particularly interesting; his European trip; and finally his return to practice, prolific of honor and of the more substantial of this world's rewards.

The book is a happy production, and will be especially enjoyed and appreciated by those who were fortunate enough to have had a personal acquaintance with Dr. Gunn.

VACATION TIME OR HINTS ON SUMMER LIVING.

This is a bright little book by H. S. Drayton, M. D., just issued from the press of Fowler & Wells Co., New York.

It is seasonable, filling a niche heretofore vacant, for while we have books giving us good advice about how to live when the

weather is cold and the northeast winds blow, this supplies us with a variety of useful information about Summer living, and takes into the account the recreations and diversions that are supposed to belong to warm weather, and into which both old and young enter, according to their circumstances.

The author writes in a pleasant style and really covers a good deal of ground in a few words. He talks of life at the seaside, in the mountains, of boating and bathing, games, excursions, etc., puts in some very practical hints on eating and dress, and the management of household economies, and has a word of advice to mothers and housekeepers that they cannot but value. Even the stay-at-homes get a thought or two that must be encouraging. As an epitome of Summer hygiene the book is so good and practical, that they who would read it and follow its suggestions could not but get real profit out of their summering, wherever they might be.

A Clinical Text-Book of Medical Diagnosis for Physicians and Students—Based on the Most Recent Methods of Examination. By Oswald Vierordt, M.D., Professor of Medicine, University of Heidelberg. Authorized Translation from the second improved and enlarged German edition, by Francis H. Stuart, A.M., M.D. With one hundred and seventy-eight illustrations, many of these colored. Published by W. B. Saunders, 913 Walnut St., Philadelphia, Pa. Pp. 700. Price, cloth $4.00, sheep $5.00.

Dr. Stuart is to be congratulated on having bestowed upon English medical readers the knowledge of this scholarly and complete work on Medical Diagnosis.

The author, Vierordt, was for four years Teacher of Diagnosis in the medical clinic at the University of Leipsic. In the second edition the author has added much new material, chiefly to the section upon the Examination of the Contents of the Stomach, and the section on the Examination of the Organs of the Senses, especially of the eye. The Laryngoscopic Examination of the Larynx has been more extensively treated than in the first issue. A section is added upon the Enlargement of the Vessels of the Brain, and a concise presentation of those peculiarities of micro-organisms whose recognition and discrimination are made possible by cultures and inoculation.

The translator has also made some additions, and included among them a very full subject index.

Intelligent diagnosis is the first condition requisite for the specific application of therapeutic agents. Many of the works issued on this subject have been incomplete.

The work before us comprises eight chapters, with an appendix, in which under the heading of: Examination of Patients; General Examination; Examination of the Respiratory, the Circulatory, the Urinary Apparatus; and the Examination of the Nervous System. The appendix contains: Laryngoscopic Examination of the Larynx; Examination with the Ophthalmoscope; Bacteria which Come under Consideration in the Diagnosis of Internal Diseases.

Woods' Medical and Surgical Monographs. Vol. II, No. 1. July, 1891.

"Hay Fever and Paroxysmal Sneezing," by Sir Morrell Mackenzie; "Tuberculosis of the Joints and Bones," by Dr. Fedor Knauss; "A Study of Malignant Diseases of the Upper Air Tract," by T. H. Bosworth, M. D.

The article on "Hay Fever," etc., by Mackenzie, will be of much interest at the present time when hay fever is prevailing. It is a comprehensive review of the history, ætiology and treatment of hay fever.

"Tuberculosis of the Bones and Joints" is made interesting by the addition of illustrations of merit.

Dr. Bosworth considers in his article, Sarcoma and Carcinoma of the Upper Air Tract.

The Surgical Treatment of Wounds and Obstruction of the Intestines. By Edward Martin, M.D., and H. A. Hare, M.D. Published by W. B. Saunders, Philadelphia, Pa. Price, $2.00.

This work comprises 167 pages, divided in fourteen chapters, with an introduction on Intestinal Obstruction. and supplemented by a Summary of Gun-Shot Wounds of the Abdominal Contents. The chapters consider, *seriatim*, Congenital Malformations, Intussusception, Internal Strangulation, Volvulus, Obstruction from Foreign Bodies, Intestinal Paralysis, Chronic Obstruction, Peritonitis;

On Diagnosing the Various Forms of Intestinal Obstruction and on the Treatment of Same, General, Special and Surgical; Wounds of the Intestine, and Rupture of the Intestine.

CONTENTS OF SCRIBNER'S FOR AUGUST.

"She is Tall and Fair." Frontispiece. Drawn by Albert Lynch; engraved by Andrew.

"Piccadilly." By Andrew Lang. [The third article of the series on the Great Streets of the World.] The illustrations by W. Douglas Almond; engraving by C. I. Butler, Geo. Del'Orme, E. Clément, F. Leblanc, and M. J. Whaley.

"The Anatomist of the Heart." By T. R. Sullivan. Illustrations by Albert Lynch; engraving by T. H. Heard.

"Song and Sorrow." By Mrs. James T. Fields.

"The Wrecker"—Prologue and Chapters I.–III. (To be continued.) By Robert Louis Stevenson and Lloyd Osbourne. With an illustration by William Hole.

"In Absence." By Archibald Lampman.

"Dead Men's Holiday"—After Shipka. By Louise Candler Moulton.

"Uneffectual Fire." By Annie Eliot. Illustrations by W. L. Taylor; engraving by W. B. Closson, Frank French, and Henry Wolf.

"At the Ranch of the Holy Cross." By A. A. Hayes. Illustrations by Charles Broughton; engraving by E. H. Del'Orme and H. C. Merrill.

"The Dunchurch Bells." By Archibald Gordon.

"Elsket." By Thomas Nelson Page. Illustrations by W. L. Metcalf; engraving by Gustav Cruell.

"The Great King's Dream."

"Parliamentary Days in Japan." By John H. Wigmore. [The second and final article on the new Political Régime in Japan.] With illustrations.

"The Song of the Comforter." By John J. A'Becket.

"The Point of View." The Question-of-the-day Novel—Anonymous Journalism—A Crucial Time—The Malady of Success.

Notes and News.

A Point in the Collection of Physicians' Bills.—

The rulings of the courts on the question of collecting bills are of the most intense and exciting interest to physicians, and it is with this in mind that we present a recent decision of the General Term of the New York Supreme Court. In this case a physician rendered medical services to the wife, and in a suit to recover the value of his services, made the husband and wife both defendants. On the trial the plaintiff was asked whether he relied on the husband or the wife for payment, and the question was allowed, although objection was made by the defendant. He replied that he relied on the wife. The case was decided against the defendant, and she appealed. The Court held that the question was improper, and directed a new trial. The ground of the decision was that the facts of the case were to decide who was liable for the bill, and that the physician could not settle the matter by declaring his intention to be to hold the wife responsible instead of the husband.—*Medical Record.*

Association for the Advancement of Medicine by Research.—

The British Medical Journal calls attention to the valuable labors of this Association. Its work is done quietly, and consists not only in aiding research, and defending it from unjust attack, which was its first object, but as a committee of unimpeachable qualification it has on certain occasions, and, in fact, almost regularly, served as a friendly court of reference where any undue difficulties seemed likely to arise as to necessary physiological experiment in pursuance of research. The Association has been largely supported by the munificence of a few of the leading members of the profession.

The Hygiene of Underground Railroads.—

The Medical Press and Circular states that the air in the tunnel through which the London Underground Railway is run, is remarkable for its purity, and for the absence of anything of the nature of a disagreeable effluvium. One odor is very perceptible, but

it is that of ozone, produced, it may be assumed, by the action of the powerful electric currents by which the line is worked. Being *per se* a powerful oxydizing agent, it may doubtless be relied upon to hold in check the musty emanations which usually characterizes these underground passages. "Indeed," says the Press, "a humorous contemporary suggests that, as ozone is the prime vivifying agent in the air at the seaside, in country lanes, and on mountain tops, a few hours passed daily on the electric road might not improbably have a decidedly beneficial effect on anæmic and oxygen-starved Londoners."

Meeting of the American Electro-Therapeutic Association.—

The American Electro-Therapeutic Association will hold its first annual meeting at the Hall of the College of Physicians, corner of Locust and Thirteenth Streets, Philadelphia, Pa., Thursday, Friday and Saturday, September 24th, and 26th, 1891, under the Presidency of Dr. G. Betton Massey.

Physicians interested in the discussion of electricity in medicine, are invited to attend without further notice.

Wm. H. Walling, M. D., Secretary, 2005 Arch St., Philrdelphia.

An Ordinance to Secure Legible Prescriptions.—

The Austrian Minister of the Interior has recently issued an ordinance that the burgomasters of all communes must exercise strict supervision over the medical men practicing within their jurisdiction in the matter of legibility of prescriptions. They are charged to see that every prescription is clearly and legibly written in all its parts, so that there may be no doubt as to the remedy, the dose, or the signature.

Vaginismus in Fiction.—

Vaginismus has made its appearance as a factor in the plots of fiction. The Lancet Clinic states the romancist Viquet, in his "L'Eternelle Blessu," has made a psychological study of two beings united by marriage but separated by vaginismus, in which there is a continual struggle between love and constrictors. In one chapter he describes how.

Therapeutic Brevities.

Secret Remedies in France.—In the Journa d'Hygiène of June 11th is published the re ply of M. Crinon to a letter from Sir Edwar Sieveking to the French Society of Hygien asking for precise information on the subje of secret remedies in France. It runs:

"There are a very considerable number c secret remedies in France. Among secret rem edies are included every drug not contained i the French Pharmacopœia, or not approve by the Academy of Medicine. Since the pub lication of the last edition of the Pharmac pœia no drug has been formally approved b the Academy, and therefore every non-officia drug comes under the heading of 'secret re medy.' Slight variations of official formul do not, however, come under this heading as they are allowed in practice to be legal. This comprehensive and sweeping definitio of a secret remedy may have the virtue o simplicity, but it has the drawback of includ ing these new drugs which are in no sens secret. It bans all new therapeutical sub stances with an unpleasant name, until the have been formally received into the Frenc Pharmacopœia, even though their formul and mode of preparation are as well know as those of any official drug.—*Brotish Medi cal Journal.*

Treatment of Gonorrhœa.—Dr. Hanika, o Munich, recommends (Der Aerztliche Prak tiker, No. 11, 1891) that gonorrhœa be treate by filling the urethra with a powder com posed of equal parts of tannin, iodoform, an thallin sulphate, and states that in twenty six cases in which he has used this metho of treatment it never failed to cure the dis ease in a very short time. The powder i introduced through a metal tube fitted witl an obturator, a straight instrument bein used when the anterior portion of the ure thra only is affected, and a curved one whe the posterior portion has to be reached. Th application is always to be made immediately after the patient has emptied his bladder In most of Dr. Hanika's cases the proces was repeated only once a day, but the resul was more favorable when the application were made night and morning. Dr. Hanik states that he has, by this means, often cure the most violent gonorrhœa in a few days.

Spermin.—Recently the Journal de Medi cen published a new and remarkable state ment by Brown-Séquard, with reference t spermin. In the new experiments on him self, he experienced a regulation of the

bowels, increase of muscular energy, and a noteworthy facilitation of mental labor, but the effect of spermin vanished after the lapse of six weeks. Brown-Séquard felt obliged to again resort to the remedy after becoming very much debilitated by an attack of whooping-cough. At his then residence, he was unable to render aseptic the liquid produced by the trituration of two Guinea-pig testicles with two cubic centimetres of distilled water, hence employed it per rectum.

Passing to a consideration of the results obtained on others, Brown-Séquard states that one patient, who was completely overcome by cachexia palustris, showed striking improvement after the injection of the testicular liquid. Very favorable results have likewise been observed from the use of spermin in dyspepsia, incontinence of urine, lepra, at times in tabes, and also, and more particularly, in anæmia.—*Pharm. Post.*

The Treatment of Influenza-Neuralgia with Sweat Baths.—Frey (Deutsche Medicinische Wochenschrift, March 19th, 1891) reports his experience with the use of this agent in the neuralgia accompanying influenza. Using simply the steam or hot air bath, he found the best results in the ordinary typical forms of neuralgia. The more recent the case the better were the results. In other forms of neuralgia he was less successful. Believing that influenza is due to a specific micro-organism, he questions whether the neuralgia occuring with it may not be occasionally in the nature of an infectious neuritis. In all these cases the ordinary drugs uses against this form of trouble had been used without avail. He thinks there is a strong analogy between malarial and influenza-neuralgia.

The Dermic Method of Administering Quinine to Children.—Professor I. V. Troitski (Vratsh, April 18th, 1891) objects to this method, even in cases of an irritable condition of the gastro-intestinal tract. He states that the degree of absorption by this method is not yet known, and *â priori* one may suppose that it varies with the physical condition of the patient. The best place for the inunctions, he thinks, is the thorax posteriorly. The quinine is best absorbed when prepared with glycerin and alcohol. After the inunctions, the presence of quinine is detected in the urine, but the amount absorbed into the blood is too insignificant to have any antipyretic action. If there is any, it is due mostly to the alcohol used with it. In children above seven years of age the absorption becomes insignificant in amount.

Post-Surgical Delirium.—The Médécine Moderne of January 22d, 1891, contains a paper by Professor Le Dentu upon this subject. Dupruytren earlier described nervous delirium following surgical operations, was violently opposed by Broca, and by Festal and Verneuil, who consider this condition and delirium tremens identical. But nervous delirium and delirium tremens are distinctly two. Post-surgical insanity may assume the form of mania or melancholia, which is also true of alcoholic insanity. Five cases of acute mania, post-surgical, are cited. The attack came and went suddenly, lasted from a fortnight to two months or more, and left the patients in full possession of all their mental faculties. The five cases of melancholia of sudden appearance following surgical operations, resulted in two deaths, one improvement, and two perfect cures.

Therapeutic Properties of Lysol.—Michelsen (Centralblatt für Gynäkologie, No. 1, 1891) has made a careful trial of lysol, a coal tar product obtained from cresole, a higher homologue of carbolic acid. This new antiseptic is readily soluble in water, and is said to be superior to carbolic acid and creolin as a germicide. The aqueous solution has a soapy feel, and in gynæcological practice renders the use of a lubricant unnecessary. This same quality, however, is often an inconvenience, as instruments and ligatures subjected to the action of an efficient solution (5 per cent.) become slippery and difficult to handle.

Ergotin in Chronic Blennorrhœa.—According to the Viadomosci Lekarski, cited in the Gazette des Hôpitaux for June 11th, Dr. Roicki has had great success in the treatment of chronic blennorrhœa by the use of ergotin. In addition to giving the drug internally in pill form, he makes use of a solution (five grains to ten ounces of distilled water) as a urethral injection several times daily. The Polish physician maintains that the treatment results in a rapid and permanent cure.

Menthol in Hay Fever.—Hay fever has so many remedies that I almost hesitate to bring forward a simple remedy for relieving the nasal form of that ailment. The drug I have found most useful is menthol, and it acts best when placed in an ordinary smelling bottle mixed with carbonate of ammonia, and used as smelling salts. Patients say all irritability disappears, and in many cases they get no return of the symptoms.—Lennox Wainwright, M. R. C. S., in *Brit. Med. Journal.*

Medical Progress.

STRICTURE OF THE DEEP URETHRA TREATED BY SQUARE-GROOVED SOUNDS.—So persistent is the tendency to relapse, and so serious is the treatment of strictures of the male urethra, that the surgeon who advances any novel method of treatment ought to be particularly cautious and not make rash or premature statements.

Some years ago it occurred to me that a wedge would penetrate a tight stricture easier than a pin, that a sound ought to be square instead of round. I have had instruments made square, and slightly grooved between the angles so that they could carry a lubricant, and have never regretted using them. I have had some made of copper, others of soft iron and steel; the copper ones I like best. They are of varying sizes of the American scale, and are coated by first dipping in metallic mercury and then rubbing until they are highly polished. No smoother surface can be made, and they glide through a tight urethra where other instruments cannot go.

The following case is given as an illustration of the utility of this method of treatment: J. H., colored, 34 years old, was referred to my service at the Detroit Emergency Hospital. He was greatly emaciated, and had chills every few days; his urine dribbled drop by drop. Had been sick for over a year, and had become addicted to the use of morphine; had suffered from gonorrhœa many times, first when he was 15 years old. Said that he had used a bougie off and on for the last ten years, but could not pass it any longer because of the pain and bleeding it provoked. His physician had tried several times to introduce a catheter into the bladder, when there was complete retention, but without success.

This history foretold a very hard and tight stricture. He was examined, and treated under chloroform anæsthesia. A No. 12 square-grooved copper sound, smeared with vaselin, was passed into the urethra, and met with no resistance until the bulb was passed, when it became wedged in the strictured urethra and could go no further without doing violence to the parts. It was at once withdrawn, and the urethra injected with pure olive oil. Then a No. 7. square-groved copper sound, freshly rubbed and coated with metallic mercury, was introduced and passed with little effort. After it had been withdrawn the urethra was again injected with sweet oil, and a No. 14 passed into the bladder. No force was used, although it was constantly apparent that the urethra was yielding to the wedge-shape of the instrument.

The patient was kept in bed for three days, and given tonics with tincture of cubebs. He had a severe chill two hours after the operation, but convalesced during the following week. He has recovered his health completely, passes his urine without inconvenience, and has not had an instrument in his bladder since the operation, more than a year ago. I might enumerate numbers of cases which have done as well as this and which would still further attest the value of this plan of treating urethral strictures but the purpose of this article is to call attention to the fact that a square wedge will split a tight stricture easier than a round sound.—Hal C. Wyman, M. S. M. D., in *International Jour. of Surg.*, June, 1891.

SOME PRACTICAL SUGGESTIONS FOR DEEP URETHRAL MEDICATION IN THE TREATMENT OF POSTERIOR URETHRAL CATARRH.—In a paper on the subject by Dr. E. L. Keyes published in New York Medical Record July 25th, he summarizes his conclusions regarding deep urethral injections as follows:

I have employed in deep urethral injection most of the substances which have repute in controlling the flow of pus from mucous membranes, even Pond's Extract. Such substances as hydrastin, boro-glycerid, nearly all the lead and zinc salts, iodoform, creolin, pyoktanin, etc.; but at the present writing I have come to rely almost exclusively upon four substances—the sulphate of thallin, the glycerole of tannin, the sulphate of copper, and the nitrate of silver. I never now make a preparatory injection of cocaine, as I consider it unnecessary, often harmful.

The Sulphate of Thallin.—This I consider a very valuable drug. I have used it for about four years, and always with increasing frequency and confidence. It is bland and practically unirritating, and may be used up to a saturated solution, which is about twenty-four per cent. It is suitable for all the acuter forms of inflammation (except in cases of acute frank, recent gonorrhœal cystitis, in which the nitrate of silver has the preference), and is the substance I almost invariably commence with, in a solution in water of about three per cent., increasing at each injection up to six, nine, and twelve per cent. The last-named strength will usually do all that thallin can do in reducing the show of free pus in the first urinary rush. The intervals of making this mild injection are best spaced by two, three, or four days,

ccording to the effect, which is sometimes onderfully prompt and gratifying. The jection causes practically no discomfort, nly a little warmth as a rule, and may be tained as long as the patient chooses.

The Sulphate of Copper.—This substance use in a ten per cent. solution in pure lycerin. This I dilute with water for use, mmencing at about one grain to the ounce nd working up rather rapidly, if it agrees nd has a good effect, to the full forty-eight rains in the ounce. It is markedly astring- nt in suitable cases, and generally, in weak lutions, pains but little more than thallin; ery strong solutions, however, of course el hot, and cause precipitate and moderately ainful urination for perhaps several hours. he stronger the solution, the longer the in- rvals before a second application is advis- ble. I do not very often go above a rength of ten grains to the ounce.

The Glycerole of Tannin.—This substance, ure, is too thick to be sucked up into a ringe easily. I use it reduced by adding ater, seventy-five, fifty, or twenty-five arts where a more astringent (but some- mes less irritative) influence is aimed at an that procured by the copper solution.

The Nitrate of Silver.—I employ this medy as high as a ten per cent. solution, ut very, very rarely—practically never in atarrhal cases—use anything like this rength. It is most useful in acute gonor- hœal cystitis, and as a final astringent when opper and tannin are not efficient. I dilute with water at each time of application, ommence usually as a strength of one grain the ounce, and very rarely have to go be- ond ten, making the applications every ree to eight days—studying the effect and eing guided by it. This is the harshest of he applications, causes the most pain, pre- ipitancy, and urgency of urination (which ften lasts several hours), but frequently enders incalculable service. Carefully used, is free from the danger of producing com- lications.

By the careful and observant use of these our solutions, which anyone may easily aster after a few trials, the greatest ad- antage may be obtained in suitable cases of osterior urethritis. Did I not have them at ny command, I think I should give up the reatment of gleet. When they disagree the act is immediately obvious, their good effect qually clear when they suit a given case, while their employment is generally progres- ively satisfactory. The thallin makes a lack solution when used in the same syringe with the nitrate of silver, which it takes ome time to wash out. I therefore use two syringes, one for thallin and tannin, the other for copper and silver.

Gall Stones.—Professor Naunyn delivered an address on gall stones before the Medical Congress recently held at Wiesbaden (Berliner Klin. Wochenschr., April 13th, 1891). He said the origin of gall stones was still a vexed question. According to some, they arise when the bile is overloaded with the materials that form them—cholesterin and bilirubin-calcium-carbonate (which may be called "bilirubin chalk"); according to others, from insolubility of substances owing to chemical alterations of the bile. But cholesterin exists as such, not in the bile only, but in the blood as well. Its amount in the bile is very constant, namely, 2½ per cent., and this amount is independent of the kind of diet and of the proportion of cholesterin in the blood—often far more than the bile can hold. Nutritive derangements have no influence on the amount in the bile. Again, the proportion of chalk in the bile is very constant. On the other hand, chemical alterations, as mentioned by Thudichum, which are supposed to lead to the precipitation of certain substances in the bile, have not been substantiated. Gall stones appear with a fair uniformity; there seems to be no preference for particular localities. As regards frequency, while even 5 or 6 per cent. (according to some, 10 or 12 per cent.) of all necropsies of young persons, reveal gall stones, their proportion amongst the aged is far higher. But gall stones in old people cause very few symptoms as a rule, and hence they are not diagnosed. Five times as many women are affected as men (Schroeder); they are rare before the 30th year, but after 60 years the proportion is 25 per cent. They are more frequent in women who have borne children. Hence it may be inferred that stasis in the excretion of bile cause the disease — for example, pregnancy, tight lacing, the costal respiration of women, atony in old people. Artificial thickening of bile (by evaporation) causes no lithic deposits, nor does precipitation. Gall stones appear to be due exclusively to a morbid condition of the epithelium of the bile ducts, and at first are soft, and usually have a central cavity filled with a grumous liquid. The "bilirubin chalk" and cholesterin are deposited later on, then form a shell like an eggshell, after which the interior consolidates. The contained fluid is sometimes as clear as water. The cholesterin is partly deposited outside all, partly penetrates within. The consolidation is always a secondary process.

Carbonate of lime may be deposited, in which case a stony hardness may result. The mucous membrane of the part affected is always diseased, and Meckel calls it "lithiatic catarrh, but a better term would be "desquamating angiocholitis." The stasis may also favor infection; a bacillus resembling Escherich's *bacterium coli communis* is very often found; such bacilli may permeate the whole stone. The disease may show itself as a regular typic, or an irregular atypic, cholelithiasis; the latter often leads to carcinoma, and its prognosis is therefore bad. As to treatment, no strong medicines or solvents can reach the site in sufficient strength. So-called cholagogues are most recommended, but experience makes their benefit doubtful. A mixed diet is a better cholagogue than all drugs. The excretion of bile should be furthered by warm clothing. Salicylic acid is of no use here. The diet should be rigid; any excess exacerbates the catarrh. Carlsbad water does good by exciting peristaltic movement. Surgery is often the most effectual treatment; the gall bladder may be removed altogether in some cases. Icterus is often absent, and then the disease is diagnosed as gastric spasm.—*British Med. Journal.*

A Practicable and Painless Method of Using Iodine Hypodermatically.—In the Medical News of April 14th, 1891, Dr. E. Fletcher Ingals, discussing the Shurly-Gibbes treatment of pulmonary tuberculosis, says:

"It is usually best, excepting in advanced cases, to begin with iodine, though it is apt to cause considerable smarting," etc. In the Therapeutic Gazette for April, 1891, Drs. Shurly and Gibbes say: "The iodine solution gives considerable pain to some people, to others very little; but the gold solution gives little or none. We hope that a solution can be made which will obviate this objection in the case of iodine."

Having found the use of the iodine solution exceedingly painful, in one case so severe as to lead to the conclusion that if its use was persisted in, local anæsthesia, by means of spray or other more or less inconvenient method, must be resorted to, I found that the injection could be rendered absolutely painless by incorporating with the mixture, as used by Drs. Shurly and Gibbes, a small quantity of creasote, or, better, guaiacol. Another objection to the solution as prepared by Drs. Shurly and Gibbes, is the large *quantity* necessary to be injected when it is desired to administer the full dose of one-half grain of iodine. This requires that sixty minims be introduced beneath the skin and since the hypodermatic syringe, as usually made, has a capacity of but thirty minims, either the barrel must be unscrewed and refilled, the needle meanwhile sticking in the skin, or, if the needle is withdrawn, a second puncture must be made, all requiring time and causing additional pain. This might be avoided by increasing the strength of the solution, which, I infer, has been found impractible, because of increased pain or other reasons. The object can be attained by incorporating iodoform in the solution to be used, and thus combined, the anæsthetic effect of the guaiacol is increased and prolonged. The formula that I have adopted, after a number of trials, as most eligible, is as follows:

℞ Eucalyptol (eucalypt camphor), 32 minims.
Guaiacol, pure, 16 minims.
Iodoform, 8 grains.
Iodine, 4 grains.
Ol. amygdal. dulc. (sterilized), q. s. ad 1 ounce.

Sig.: For hypodermatic use, 10 to 30 minims daily, or alternating with gold and sodium solution, as desired.

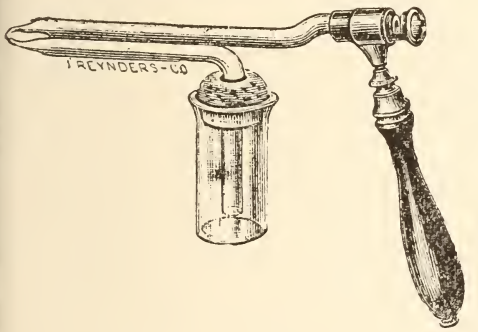
The anæsthetic properties of this solution are such that patients prefer its use to that of the gold solution, although the latter is nearly painless. Larger doses of the guaiacol and eucalyptus camphor than are contained in the 30 minims of the above solution, have in my hands caused excessive and exhausting sweating, with no proportionate benefit. The amount of iodine in this formula is the same as that contained in the Shurly-Gibbes solution, with (as will be seen) double that quantity of iodoform. Therefore the dose may be but one-third to one-half of that of the Shurly-Gibbes solution.—A. O. Squier, M.D., in *Med. News*, July 25th, 1891.

A New Spray Tube—Specially Designed for the Application of Medicated Oils and Fats to Any Part of the Respiratory Tract.—On looking over the various vaselin and oil sprays, I found that none could conveniently be connected with the compressed-air apparatus, and with this object in view I designed the appended spray tube.

The tube itself is but five inches in length, having a fine point drawn out only about one-half inch (instead of one inch or more, as is usual with the Sass tubes), thereby insuring strength and rendering it less liable to break.

The handle fits over the bayonet attach-

ent, and is removable by unscrewing it ne-half a turn, and thus it can rapidly be ken from one tube and put on to another, ven while the tubes are in the spray-rack, ne handle being sufficient for any number tubes. The handle is set at an angle, vercoming some of the objections of appli- tion in stout persons.



In using vaselin or solid oils, or if it be esirable to warm solutions before applying em, one can readily see how nicely these an be heated, without burning or soiling the ngers, for we take them out of the rack by ne handle and not by the tip. The spray rown from this tube is very fine and light, nd can be inhaled into any part of the spiratory tract. Tubes with an upward or ownward tip can be made—and should be ne inch longer—but are considered unnec- ssary, for it is soon evident that the spray, hen blown through the nares or into the outh, passes into the trachea without any spiratory effort on the part of the patient, s evidenced by a fine cloud coming from the outh on expiration. I now use these tubes or all medicated sprays in preference to thers, as they are handier, there is less loss f liquid, and the hands are secure from aining.—A. N. Strouse in *Medical Record*, uly 11th, 1891.

Treatment of Acute Prostatitis and rostatic Abscess.—William R. Ballou, in . Y. Medical Journal, July 25th, 1891, sug- ests the following treatment:

In all cases, in the beginning absolute rest bed is to be enforced whenever practicable, nd all local urethral medication stopped at nce. A brisk purge at the beginning is ad- isable, although such an authority as Regi- ald Harrison looks upon this with marked isfavor. Laxatives should be given at in- ervals later on.

Alkalies—such as ten grains of citrate of otassium or five drops of liquor potassæ ith tincture of hyoscyamus in drachm doses, every three hours—I have found most efficacious in diminishing the pain and frequency in micturition. These should be kept up during the whole course of the disease. Local remedies to the perineum are often of service, such as leeches, hot fomentations, fly-blisters, or cantharidal collodion. Hot hip baths are often of benefit. Morphine internally, or suppositories containing opium and belladonna, are often required for the intense pain.

If retention of urine occurs, as it sometimes does, a soft catheter should be passed after the urethra has been irrigated with a mild solution of potassium permanganate. After evacuation of the bladder, this should also be washed out.

Sometimes a metallic instrument may be required, but it should be used with caution, as the softened prostate may easily be lacerated and false routes formed. Aspiration above the pubes may sometimes be preferable. If abscess forms, a free incision should be made, the position varying in different conditions. I would not take too arbitrary a stand on this point, but vary with its tendency to pointing.

Even if fluctuation is not distinct, a free and deep perineal incision should be made with the patient in the lithotomy posture. The formulating of this procedure was first brought forward by Dr. Gouley, several years ago.

After evacuation under antiseptic details, the abscess should be washed out with a solution of bichloride of mercury (1 to 3,000), and a large drainage-tube passed deep into its cavity.

Even if fluctuation is not present and abscess is suspected, I should recommend a free perineal or rectal incision to relieve the great tension under the fibrous capsule.

After a few days pus is sure to form in the severer cases, and an incision shortens the duration of the disease and relieves the pain in a marvelous manner.

The passage of a sound into the bladder in the hope of rupturing the abscess into the urethra is sometimes recommended.

The Abortive Treatment of Buboes.—Welander (Archiv für Dermatologie und Syphilis, 1891) endeavored to eliminate a specific bacteria from chancroidal pus, but failed. The staphylococci and other cocci found were readily killed with mercurial lotions. Believing that buboes were caused by the transference of the staphylococci and streptococci, from the chancroid by means of the lymph channels to the glands, he endeavored to find

a mercurial preparation which, when injected in concentrated form, would not cause intense pain or marked irritation. The material here used was benzoate of mercury, in one per cent. solution, with one-half per cent. of sodium chloride added. One or two injections of a half-gramme of this liquid were made into the gland. The skin was previously cleansed, also the syringe. A compress of sublimate solution was bound over the gland. Redness of the overlying skin was treated by pencilling with ichthyol solution, 1 to 2–3. The details of thirty-two cases are given. In twenty-seven of these fluctuation was either absent or doubtful. In eighteen hospital cases healing occurred without discharge of pus; in two some pus oozed out through the injection puncture. These cases were kept at rest. In nine private cases healing occurred without discharge, and three discharged pus. In eight cases, in which fluctuation was marked, all sooner or later discharged through the injection opening; none absorbed. Most of them pursued a relatively favorable course, and in only two was incision necessary. There are sixteen cases still under treatment. In summing up, seventy-three per cent. of the cases gave favorable results. It is to be hoped that a mercurial preparation will be found that causes less pain and infiltration than the benzoate of mercury; but as yet we know of none. Whether the theoretical grounds on which this treatment was founded are accepted or not, it cannot be denied that by this means buboes have been healed without the occurence of those unsightly and lifelong lasting scars, as has heretofore been the case.—*University Medical Magazine*, August, 1891.

A Method of Controlling Uterine Hemorrhage.—After having vainly tried all ordinary methods, such as ergot, injections of astringents, etc., I recently controlled a severe case of uterine hæmorrhage by the following method: I took an ordinary rubber condom and introduced into it an ordinary male catheter, fixing the open end of the condom securely around the staff of the catheter by wrapping it several times with stout thread. I then adjusted a common syringe to the catheter and introduced the latter, carrying with it, of course, the condom, into the cavity of the uterus up to the fundus. This left the lower end of the rubber bag about on a level with the external os. I then proceeded to inject water into the cavity of the condom, speedily checking all hæmorrhage. I could not have wished for a better result. I think this will be found a valuable means of arresting uterine hæmorrhage by all who will give it a trial.

I shall try this method of arresting post-partum hæmorrhage, by having a suitable apparatus made upon the same plan, with a larger bag, etc., and have the catheter of rubber, so that it can be left in position without inconvenience. The bag could, of course, be inflated with air, hot or ice-water, if necessary; in the first instance avoiding the weight of water, in the latter getting the benefit of heat or cold, as desired. The contents of the bag could be allowed to escape gradually, thus permitting the uterus to contract by degrees. The bag could be left in position for a considerable length of time without danger. I think this will have several advantages over intra-uterine tamponnement by means of strips of gauze, as suggested in the Medical News of January 24th.—Bruce Peden, M. D., in *Medical News*.

Fallacies in Therapeutics of Epilepsy.—From Hughlings-Jackson and Ferrier the most salutary lessons in patient observation and earnest research may be learned. Seguin has recently emphasized the fact that epilepsy is not an entity, but that each case requires individual study and treatment. The apparent results of drugs are very misleading. It will not do to base conclusions on the action of remedies during two or three months, for in the natural history of the case there may be periods of absolute or comparative freedom from attacks. To know whether epileptic seizures are really lessened in number, a drug must be given for at least a year. Tolerance is often established, the remedy fails to avert the epileptic catastrophe, and it cannot be said to have done more than postpone the storms that are often more severe than before. Nine cases of so-called epileptic insanity were treated with paraldehyd for four months, with the result of lessing the attacks from twenty-five to seventy-five per cent. as compared with the five months previous, during which time the patients received bromides and tonic treatment alternately. But during the four months following, the four that were signalized by such a happy diminution in the number of seizures, the results were disappointing. The attacks were not averted in the same proportion. And this is the history of many vaunted remedies. At the same time conparatively new remedies, such as acetanilid, analgesin, borax, chloral, bromide of gold, etc., deserve a fair trial. Greater caution is needed in announcing results.—Theo. Diller in *Uni. Med. Mag.*

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Original Articles.

THE HYGIENIC TREATMENT OF OBESITY.*

BY DR. PAUL CHERON.

In order to properly regulate the régimen of the obese, it is first necessary to determine the source of the superfluous adipose of the organism, since either the albuminoids or the hydrocarbons may furnish fat.

Alimentary fat becomes fixed in the tissues, as has been proven by Lebede, who fed dogs, emaciated by long fast, with meat wholly deprived of fat, and substituted for the latter linseed oil, when he was able to recover the oil in each instance from the animal; parallel experiments with mutton fat, *in lieu* of oil, afforded like results.

Hoffmann also deprived dogs of fat food for a month, causing to lose as high as twenty-two pounds weight, then began nourishing with bacon fat with but little lean; the quantity of fat formed in five days, in the dog that lost twenty-two pounds, was more than three pounds, which could have been derived only from the bacon fat.

It has been stated, however, that alimentary fat seems to preserve from destruction the fat of the organism which arises from other sources. Be this as it may, it is a fact that the pre-existence of fat furthers the accumulation of more adipose; or in other words, fat induces fattening!

That adipose may be formed through the transformation of albuminous matters (meat), is an extremely important corollary, one established beyond cavil by Pettinkofer and Voit, in an indirect way, by first estimating the nitrogen and carbon ingested, and second the amount eliminated. Giving a dog meat that was wholly deprived of fat, they found it impossible to recover more than a portion of the contained carbon, hence some must necessarily have been utilized in the organism, and this would be possible only by the transformation of the carbon into fat! It goes without saying, however, that the amount of adipose thus deposited is meagre.

Other facts also plead in favor of the transformation of a portion of albumen into fat within the economy, notably the changing of a portion of dead organism into what is known as "cadaveric fat," and the very rapid fatty degeneration of organs that supervenes upon certain forms of poisoning, as by phosphorus.

The carbo-hydrates, or more properly speaking, hydrocarbons, are regarded by all physiologists as specially capable of producing fat, and numerous alimentary experiments have been undertaken to prove this point. Chaniewski, Meissl, and Munk, obtained results that evidenced, apparently, sugar and starch provide more fat than do the albuminoids. Voit, however, disapproves this, maintaining the greater part of the hydrocarbons is burned (furnishes fuel for the immediate evolution of force), and that fat cannot be stored up unless a due proportion of albuminoids is also administered. He believes the hydrocarbons exert a direct influence only; being more oxydizable than fats, they guard the latter from oxydation—this protective rôle of the hydrocarbons applies also to the albuminoids.

We may believe then, that the three great classes of ailment yield fat, in some degree; that alimentary fat may be fixed in the tissues; and that hydrocarbons favor the deposition of adipose either directly or indirectly.

It is well understood that fat may disappear with great rapidity under certain conditions; many maladies are accompanied by speedy emaciation; therefore, as fat never passes into the secretions, at least not in appreciable quantities, it probably undergoes transformation, perhaps by oxydation or a form of fermentation, the final results of which are, directly or indirectly, water and

* Translated expressly for MEDICAL AGE, by Mr. Jos. Helfman, Detroit, Mich.

cadaveric acid.—It is certain the process of oxydation favors the destruction of adipose, and that everything which inhibits such destruction tends to fat-accumulation.

Since the earliest period of history, there seems to have been an anxiety to secure some régimen of general application that would reduce or combat obesity. Thus Hippocrates says:

Fat people, and all those who would become lean, should perform laborious tasks while fasting, and eat while still breathless from fatigue, without rest, and after having drunk diluted wine not very cold. Their meats should be prepared with sesamum, with sweets, and other similar substances, and these dishes should be free from fat.

In this manner one will be satiated through eating less.

But, besides, one should take only one meal; take no bath; sleep on a hard bed; and walk as much as may be.

How much has medical science gained in this direction during the interval of more than two thousand years? Let us see:

First among moderns to seek to establish on a scientific basis a régimen for the obese, was Dancel, who forbade fats, starchy foods, etc., proscribed soups and aqueous aliment, and reduced the quantity of beverage to the lowest possible limit; at the same time he employed frequent and profuse purgation.

This régimen, which permits, at most, but seven to twelve ounces of fluid at each repast, is somewhat difficult to follow, though it may be obtained, gradually, with ease. Dr. Constantine Paul records a case in which this régimen, gradually induced, and followed for ten years, rewarded the patient with "moderate flesh and most excellent health."

In Great Britain, a mode of treatment instituted in one Banting, by Dr. Harvey, whereby the former was decreased in weight forty pounds, has obtained somewhat wide celebrity; and what is more remarkable, it is known as "Bantingism," taking its name from the patient instead of the physician who originated it. The dietary is as follows:

Breakfast.—Five to six ounces of lean meat, broiled fish, or smoked bacon—veal and pork interdicted; a cup of tea or coffee without milk or sugar; one ounce of toast or dry biscuit (crackers):

Dinner.—Five to six ounces of lean meat or fish—excluding eel, salmon, and herring; a small quantity of vegetables, but no potatoes, parsnips, carrots, beets, peas, or beans; one ounce of toast, fruit, or fowl; two glasses of red wine—beer, champagne, and port, forbidden:

Tea.—Two or three ounces of fruit; one kind of pastry; one cup of tea:

Supper.—Three or four ounces of lean beef or fish; one or two glasses of red wine:

At bed-time.—Grog without sugar (whisky and water, or rum and water), and one or two glasses of sherry or Bordeaux.

"Bantingism," to be effective, must be most closely followed, when, unfortunately also, it proves extremely debilitating; it is suitable only for sturdy, hard-riding, gluttons of the Squire Western type. The patient rapidly loses strength as well as flesh, and speedily acquires an unconquerable repugnance to the dietary. Further, from a strictly physiological point of view, the quantity of meat is greatly in excess, while with the cessation of the régimen, the fat quickly reappears.

Next Ebstein formulated a dietary that is certainly much better tolerated than that of Harvey and Banting, and yields as good, or even better, results. He allows patients to to take a definite quantity—two to two and a half ounces—of fat daily, in the form of bacon or butter which, theoretically at least, offers several advantages: It diminishes the sensations of hunger and thirst, and plays a special rôle with respect to the albuminoids; the latter may thus be assimilated by the economy without being resolved into fat, and thus the adipose of the organism at this period is drawn upon without subsequent renewal. The following is the outline:

Breakfast—at 6 A. M. in summer; 7:30 in winter.—Eight ounces of black tea without either milk or sugar; two ounces of white bread or toast, with a copious layer of butter:

Dinner—2 P. M.—A modicum of beef-marrow soup; four ounces of meat, preferably of fatty character; moderate quantity of vegetable, especially the legumines, but no potatoes or anything containing starch; raw fruits in season, and cooked fruits (stewed, without sugar); two or three glasses of light

wine as a beverage, and after eating, a cup of black tea without sugar:

Supper—7.30 P. M.—An egg, bit of fat roast, ham, or bacon; a slice of white bread well buttered; a large cup of black tea without milk or sugar; from time to time, cheese and fresh fruits.

Germain Sée suggests as a modification of this régimen, the abundant use of beverage, the addition of gelatins, and at times small doses of potassium iodide; in twenty cases he claims constant, and relatively prompt, results.

Whatever may be urged for Ebstein's system—and it has afforded most excellent results to Unna, and to Lubé, as well as its author,—it certainly exposes the patient to the terrors of dyspepsia, when the routine must needs be interrupted or modified; hence it is not always to be depended upon. As between dyspepsia and obesity, there are few, I fancy, who would not prefer the latter.

Another "system" that has acquired no little celebriety, and which has for its aim the reduction as far as possible of alimentary hydrocarbons while permitting a certain proportion of fat, is that of Denneth, which necessarily follows somewhat closely the lines laid down by Ebstein.

Oërtels' treatment, somewhat widely known, and not without due measure of fame, is based upon a series of measures having as object the withdrawal from both circulation and the economy at large, as much of the fluids as possible. It is especially adapted for the relief of those obese who are suffering fatty degeneration of the heart. The *menu* is as follows:

Breakfast.—Four to five ounces of tea or coffee with a little milk; two to two and a-half ounces bread:

Dinner.—Three or four ounces of roast or boiled meat, or moderately fat food; fish, slightly fat; salad and vegetables at pleasure; one and a half ounces of bread (in certain cases as much as three ounces of farinaceous food may be permitted); three to six ounces of fruit; at times a little pastry for dessert.—In summer, if fruit is not obtainable, six to eight ounces of light wine may be allowed:

Tea.—A cupful (four to five ounces) of tea or coffee, with a trifle of milk, as at breakfast; one and three-fourths ounces of bread; and exceptionally (and at most) six ounces of water:

Supper.—One to two soft-boiled eggs; four or five ounces of meat; one and three-fourths ounces of bread; a trifle of cheese, salad, or fruit; six to eight ounces of light wine diluted with an eighth volume of water.—The quantity of beverage may be slightly augmented at each meal if necessary, especially if there is no morbid heart trouble.

Schwenninger (Bismark's physician), who opened a large Sanitarium near Berlin a few years since for the treatment of the obese, employs Oërtel's treatment, modified in that an abundance of beverage is permitted, providing it is not indulged in at meals; it is forbidden until two hours after eating.

Both Oërtel's and Schwenninger's methods have procured grave dyspepsies, and fatal albuminurias as well, according to Meyer and Rosenfield. It has been charged the allowance of beverage upon which Schwenninger lays so much stress in the treatment at his Sanitarium, has a pecuniary basis, in other words a commission upon the sale of wines.*

Thus, it will be observed that while some forbid beverage, others rather insist upon its employment in greater or less quantities. Under such circumstances, it would seem but rational, before undertaking to relieve obesity, to establish its exact nature, and also the rôle taken by fluids in the phenomena of nutrition.

Physiologists generally, admit water facilitates nutritive exchanges, which is explained by the elimination of a large quantity of urine; the experiments of Genth and Robin in this direction appear conclusive.

Bischoff, Voit, and Hermann have shown that water increases, not alone the elimination of urine, but also of sodium chloride, phosphoric acid, etc. Grigoriantz observed augmentation of disintegration when the quantity of beverage exceeded forty-six to eighty ounces ("1400 to 2400 cubic centimetres") per diem. Oppenheim, Fräenkel and Débove, while believing water has but little influence upon the exchanges, admit it cer-

* The Sanitarium is owned by a stock company, Schwenninger being merely Medical Director.—Ed.

tainly need not diminish the latter; and Débove and Flament, after administering water in quantities varying from two to eight pints per diem, concluded that urine was diminished below the former figure, while above the latter it increased somewhat, being dependent upon the amount ingested. It was on the strength of the foregoing that Lallemand declared water to have no influence upon the exchanges.

The results claimed by Oppenheim, Débove, *et al.*, were immediately challenged—and it is now generally admitted not without some justice—by Germain Sée. It seems certain, to say the least, that water taken during the repast does tend to augment the quantity, and facilitate the elimination, of urine. Abundance of beverage, moreover, presents other advantages, in that it facilitates digestion by reason of its diluent action, a fact well worth bearing in mind when treating the obese who are possessed of gouty diathesis, and whose kidneys are accordingly encumbered with uric and oxalic acids. The foregoing presents the ground upon which Germain Sée permits an abundance of beverage; but he also expresses strong reservation as regards beer and alcohol, either of which (more especially the former) tends to the production of adipose. In his opinion, the only beverage of the alcoholic class that is at all permissible, and then only for cases suffering from fatty heart, is a little *liqueur* or diluted wine. Coffee and tea he commends highly, and recommends the ingestion of large quantities at high temperature, both during the repasts and their intervals. Coffee in large doses is undoubtedly a means of de-nutrition, and so, too, in no less extent, is tea; both act vigorously owing to the contained alkaloids, though, to be sure, they sometimes, at first, tend to insomnia and palpitation, to which no attention need be paid, however. The treatment outlined by Sée is:

1. A physiological régimen comprising four to five ounces of nitrogenous principles as derived from eight to ten ounces animal muscle and albuminates; three to six ounces of fat; eight to ten ounces of hydrocarbons as yielded by ten to twelve ounces of sugar or starch food.

These proportions to be modified in such manner that the musculo-albuminates shall not sensibly exceed the normal ratio, for meat in excess, itself furnishes fat during transformation. The fatty substances of easy digestion may, without inconvenience, be utilized in doses of two to three ounces. The hydrocarbons should be reduced to a minimum. As for the herbaceous elements, they contain nothing nutritive.

2. Beverage, far from being suppressed, should be augmented, in order to facilitate stomachal digestion and promote general nutrition, though alcoholic liquids must be inhibited; likewise mineral waters, except, perhaps, for occasional use. Both should be replaced by infusions of coffee or tea, taken as hot as can be drank.

Henrich Kisch insist that any method which promises rapid and marked decrease of adipose, must, *per se*, be objectionable, even if not positively injurious, since it tends to provoke general troubles of nutrition. He suggests that first the fats and hydrocarbons be reduced as little as possible; that a moderate mixed régimen is required, containing a preponderance of albumen, small quantities of hydrocarbons and gelatinous matters, with but very little fat. Certain fatty meats, however, should be generally interdicted, such as pork sausage, smoked beef-tongue, goose breast, smoked ham, fat salmon, and herring in any form. Eggs, however, may be partaken of in moderation, giving preference to the albumen over the yelk. Farinaceous foods, in the main, should be rejected, even bread being allowed only in small quantities, and then preferably in the form of toast. Cheese likewise contains too much fat; and mushrooms are so rich in hydrocarbons that they should be rejected. Condiments, water, vegetable acids (vinegars excepted) may be permitted; especially pernicious is vinegar where there is any tendency to gout or gravel. All fatty beverages—*bouillon*, unskimmed milk, chocolate, or cacao,—and all alcoholics, are hurtful; breakfast tea is undoubtedly the best beverage, but, after a little, is advantageously replaced by light white wine diluted with water.

Kisch believes in a free and abundant use of water by the obese, especially where there is a tendency to plethora, since this fluid facilitates oxydation as the result of absorp-

tion; thus he advocates the inhibition of large quantities of cold water by all, save those presenting evidence of cardiac insufficiency. In short, his régimen is based upon the administration of a large quantity of albumen, like that of Harvey-Banting.

E. Munk recommends an almost identical dietary, save that he prefers great moderation in fluids employed as beverage.

M. Robin has sought to harmonize the opposing views regarding fluids, and therefore declares obesity arises from two distinct sources: 1. Augmentation of assimilation : 2. Reduced disassimilation. In the former, he insists water must be interdicted, while in the latter it may be allowed *ad libitum.*

Again, in order to recognize the exact variety of obesity, he divides his patients into three classes, each recognizable by the volume of urea excreted.—In the first, there is increase above normal; in the second the volume of urea is stationary; in the third decreased, increased, or stationary.

When the urea is stationary, which is most frequently the case, it is necessary to calculate the coëfficient of oxydation; that is, the relation existing between the solid matters of the urine and the urea. The elevation of the coëfficient is *prima facie* evidence the obesity is due to excess of assimilation, while depression of the coëfficient indicates default of assimilation. In the first case, water and liquids must be denied as far as possible, the same as if there was no augmentation of urea; in the second, the same as if there was diminution of urea, the patients may be permitted to imbibe fluids at pleasure.

For the obese from default of disassimilation, Robin recommends a régimen of green vegetables, and bread chiefly,—the latter in small quantities, however, and fluids as may be desired. By this means, on one occasion, he was able, in the course of one month, to diminish the weight of a female patient by twelve and a half pounds, her measure around the waist at the same time decreasing 5.2 inches, and across the stomach 4.8 inches.

M. de St. Germain achieved good results by combining judicious exercise with moderate alimentation, excluding wine and bread.

M. Dujardin-Beaumetz, who professes to have given most close and careful study and attention to régimen for the obese, outlines the following, providing there is no evidence of fatty degeneration of heart:

Breakfast (at 8 A. M.).—Three-fourths of an ounce of bread "*en fluté*"—that is abounding in crust; one and a half ounces of cold meat, ham or beef, six ounces weak black tea, *sans* sugar:

Lunch (at 1 P. M.).—An ounce and a half to two ounces of bread, or a *ragout*, or two eggs; three ounces green vegetables; one half ounce of cheese; fruits at discretion:

Dinner (at 7 P. M.).—An ounce and a half to two ounces of bread; three to four ounces of meat or *ragout;* ditto of green vegetables; salad; half an ounce of cheese; fruit *ad libitum.*

At meal times the patient may take only "a glass and a half" of liquid—approximately ten ounces—though a greater amount may be permitted if he abstains during the intervals.

Special alimentary régimen, however, does not constitute the sole treatment of obesity. Concurrently must be employed a number of practical adjuvants which are oftentimes of the utmost assistance. For one thing, exercise is indispensable; all authorities agree on this point. The exercise taken in the gymnasium is one of the best, notably the "wall exercise," which is more particularly suited to those afflicted with pendulous and protuberant abdomens as the result of feebleness of the hypogastric muscles, to accumulation of fat under the skin and in the omentum, and to dilatation of the stomach and intestines. In the "wall exercise," the patient stands erect against an absolutely straight and plumb wall, lifts his hands (carrying a weight) straight over the head, and causes them to describe a semi-circle forward. Zantz particularly insists upon arm and leg exercise for the obese, especially the former, since with the same amount of effort a larger amount of oxygen is consumed than is possible by the latter.

However, of whatever character, the exercise should be continued to the point of fatigue or dyspnœa—three thousand movements daily, gradually increased to twenty-five thousand, if the system can bear it; and under such conditions, not only is there con-

sumption of hydrocarbons, but there is provided a veritable greed for air that augments waste. The experiments of Oërtel indicate that loss of weight due to fatiguing exercise, arises more particularly from de-hydration, which is made good by absorption of the fluids employed as beverage; the fluids are claimed by Germain Sée to act as accelerants of oxydation.

During exercise, there is obviously more abundant absorption of oxygen, and consequently greater elimination of carbonic acid, and as a consequence (as shown by researches of Voit), the reserve fat of the economy is attacked and diminished; in intense labor there is an average hourly consumption of about 8.2 per cent. of fat. Further, physical activity is useful in exercising the voluntary muscles, and thus opposing the invasion by interstitial fat of the muscle fibrils. Extreme exercise also, to a certain degree, exerts a favorable influence on the cardiac muscle, augmenting both its nutrition and its capacity for labor. With the anæmic obese, however, it is necessary to be most circumspect in prescribing forced exercise; also with the elderly obese possessed of enfeebled or fatty heart.

Hydrotherapy, especially in the form of cold douches, particularly when combined with massage, is often of considerable value in relieving obesity; the method of Harmman of St. Germain, which has in many instances induced rapid loss of adipose, is of this class. Tepid saline baths and vapor baths, have many advocates, and may afford material aid when the heart and circulation do not inhibit their employment. Hot baths elevate the temperature of the body and increase the organic exchanges, hence, as Bert and Reynard have pointed out, tend to the elimination of oxygen and carbonic acid; but when employed, the patient should be introduced while the temperature is below 130 F., when it may be gradually raised in the course of thirty or forty minutes to 140 F.

It has already been intimated, the chief feature in the treatment of obesity is acceleration of the exchanges; and this is in the main true, though it must also be borne in mind that, while there are obese who excrete little urea and have a depressed central nervous temperature, many may be azoturic, and besides eliminate phosphate in excess, when an oxydating treatment will not only fail, but prove positively injurious.

The bile throws out fat, therefore, to accelerate nutritive oxydations, the liver and nervous system must be acted upon, *i.e.* stimulated. Everything that tends to diminish the activity of the former, or depress the latter, must be avoided, hence intellectual labor should be encouraged, or in lieu thereof, travel advised. Exercise should be taken chiefly while fasting; the limits of sleep confined to strict necessity, and *siestas* after meals and during the day strictly forbidden; the skin stimulated by hydro-therapeutic measures, including massage under cold affusions, during warm salt baths, etc.

To increase the activity of the liver, salicylate of soda may often be advantageously administered for its cholagogue effect; or resort may be had to saline purgatives such as are afforded by the springs of Marienbad, Kissengen, Hombourg, Carlsbad, Bridés, Hunyadi, or Chatel-Guyon; and it is somewhat remarkable that while undergoing a course of these waters, there is often no appreciable change in weight or obesity, though the decrease becomes most marked almost immediately upon cessation of treatment.

Everything tending to increased or fuller respiration, is to be encouraged, for the fats are thus supplied with oxygen, hastening their disintegration and consumption.

Direct medicinal treatment presents no very wide scope. Bouchard imagines lime water may be useful by accelerating nutrition, but this is problematical, since fat in emulsion or in droplets does not burn. Nevertheless, alkalies in general, alkaline carbonates, liquor potassa, soaps, etc., aid in rendering fat more soluble, and consequently more susceptible to attack. The alkaline waters, however, are much less active in obesity than the saline mineral waters, unless, as sometimes happens, there is a complication of diabetes and obesity.

Purgatives are always more or less useful, and often required to be renewed with all the regularity of habit. Then too, the iodides, especially iodide of sodium or potassium, as recommended by M. Germain Sée, frequently prove of excellent service by aiding elimination and facilitating the mutations.

According to Kisch, the cold mineral waters containing an abundance of sulphate of soda, like Hunyadi and Marienbad, are to be preferred to the hot mineral waters, such as Carlsbad, because of their lesser irritant action on the vascular system, and because they strongly excite diuresis through their low temperature and contained carbonic acid; Carlsbad deserves preference only when obesity is combined with uric acid calculi, or with diabetes. For very anæmic persons, however, the weak alkaline and saline waters should be selected; or they should confine themselves to chalybeate waters containing an excess of sulphate of soda. Water containing sulphate of soda is also indicated as a beverage where there are troubles of the circulatory apparatus; it is contraindicated only in accentuated arterio-sclerosis.

As a matter of fact, I find the suggestion of M. Dujardin-Beaumetz, that the obese should be divided into two groups, a most practical one, for some are strong and vigorous—great eaters, perhaps even gluttons,—while others, on the contrary, are feeble and debilitated, with flesh soft and flaccid; and upon the former may be imposed all the rigors of the reducing system, while the latter must be dealt with more carefully.

In general, it must be noted, the régimen prescribed for the obese is insufficient, as the following table, prepared by M. C. Paul, abundantly proves:

Author.	Albuminous Matters.	Fatty Matters.	Hydrocarbons.
Voit	118	40	150
Harvey-Banting	170	10	80
Epstein	100	85	50
Oërtel	155–179	25–41	70–110
Kisch (plethoric)	160	10	80
" (anæmic)	200	12	100
Normal ration	124	55	455

There is, therefore, as Dujardin-Beaumetz asserts, autophagia in the obese, and all these varieties of treatment have but one end, viz: Reduction of the daily ration. But the quantity of nourishment should not be too greatly curtailed for, manifestly, if the fat disappears the more surely, the muscles (rich in albumen) undergo too rapid modification. It is progressive action that should always be sought.

The quantity of aliment may be reduced either by imposing an always uniform régimen, which soon begets anorexia and disgust, or by withholding from the food a considerable quantity of fat or, finally, by forbidding beverage during meals. Emaciation is obtained readily enough in either way, and demands only the constant exercise of will power on the part of the patient; but unhappily, severe régimen cannot always be prescribed. When the obese patient has passed the age of forty; when the heart suffers from degeneration; or when the heart is anæmic—in all, rigorous treatment will serve to still further enfeeble the central organ of circulation, and tend to precipitate accidents that, by all means, are to be avoided. In such cases, by *not* treating the obesity, the days of the patient will be prolonged. In degeneration of the heart, however, the method of Ebstein may be tried; and when there is renal calculi and gouty diathesis, that of Germain Sée may prove satisfactory.

Paris, France.

ON BEEF MEAL—A CONTRIBUTION TO THE QUESTION OF NUTRITION.*

BY DR. GOLINER.

Ever since the pioneer investigations of Pettenkofer and Voit respecting metamorphosis and nutrition, scientists have been untiring in their efforts to make a practical use of these labors in dietetics at the bedside. We began to recognize that only a careful selection of food and drink, in accordance with the teachings of physiology, could make good the losses of the organism exhausted by disease. Practitioners devoted their attention specially to albumen, the importance of which in metamorphosis had been established by the physiologists mentioned. Albumen is absolutely necessary for the preservation of the vital processes, and admits of replacement by other nutrients only to a certain degree; it exercises great influence on the energy of the processes of decomposition, as it

*Translated by Mr. Jos. Helfman, Detroit, Mich.

is readily split up in the nutrient, and at the same time renders the animal cell capable of decomposing other substances in larger quantity. The capacity of the organism is closely dependent on the presence of albumen in the food. Albumen is the one nutriment which in the presence of water and the necessary ash-constituents, can alone maintain the vital processes. It may therefore completely replace fat and the carbo-hydrates, whilst the reserve would not be the case. Nevertheless, an exclusive diet of meat, which is known to contain 20 per cent. of albumen, would not be adapted to the needs of human beings, because, for the maintenance of bodily vigor, they require a disproportionately large quantity of it. An adult, who on a mixed diet, gives forth daily 250. grammes of carbon and 18. grammes of nitrogen, would require to cover the loss of carbon 2,000. grammes of meat, as this contains 12.5 per cent. of carbon. But the quantity of nitrogen contained in the waste, would be covered by 500. grammes of meat, the latter containing 3.4 per cent. It is not to be inferred, however, that it is a matter of indulgence to give the body more albumen than is needed to preserve life, since the capacity and resistant power of the organism seem to be closely dependent upon a plentiful supply of meat. The albuminoids contained in our daily food must, as a rule, be first transformed into a liquid state through the energies of the digestive organs, before absorption. But we know that in most diseases, especially fevers, the activity of the digestive organs is much impared, involving a diminution in the supply of albumen and fat. While the diseased body continues to give forth the products of metamorphosis, its substance diminishes, and its weight is reduced, so long as this one-sided process continues. If, for example, a fever patient receives, besides tea or coffee with sugar and milk, only meat broth or gruel, the supply of nutriment in 24 hours would scarcely comprise more than about 8. grammes albumen, 6. grammes fat, and 57. grammes carbo-hydrates, while according to Voit, the food of people not laboring should contain 85. grammes albumen, 30. grammes fat, and 300. grammes carbo-hydrates. The loss therefore suffered every day by a patient whose diet is restricted to gruel, coffee, meat broth, etc., is very considerable, all the more as the process of decomposition is much more vigorous in fever patients than in normal individuals who receive the allowance of food stated.

In prolonged fever, we are accordingly confronted with the necessity of supplying to the organism albuminous nourishment which shall be easily and completely digested, and in quantities corresponding to the increased consumption of albumen in the fever patient. Numerous experimental investigations have yielded the unanimous result that the decomposition of albumen in every febrile affection is increased. Inasmuch as under these circumstances a much larger quantity of nitrogenous products of decomposition are given off than would be equaled by the nitrogen contained in the ingested food, the decomposition must proceed at the cost of the organs, as soon as the original supply of circulating albumen in the nutritive liquid is consumed. We must, therefore, supply the fever patient with as much albumen as he can digest; the fever patient can then be spared further supplies of albumen, since the waste of nitrogen increases *in toto*, but the supply of nitrogen from the body becomes less. Physicians have sought to serve this purpose by administering peptone preparations to fever patients, that is, albuminous nutrients in soluble readily digestible form, sparing the debilitated organism the labor of digestion. By digestion with artificial gastric juice, employing pepsin or pancreatin, peptones have heretofore been produced from beef, syrupy in character, and containing about 50 per cent. of peptone. But one great objection was encountered in each of these preparations, which interfered with its employment, viz., the repulsive taste which soon rendered the product disgusting to the patient.

Of late we have been furnished from America, by the Mosquera-Julia Food Co., of Detroit, with a new dietetic preparation manufactured in accordance with a new and very original principle. This preparation, briefly termed "Mosquera Beef Meal," is a fine meal made from choice lean beef. In order to convert the constituents of the beef into peptone, the beef is subjected to the

action, not of an animal ferment, but of a vegetable digestive principle—the juice of the pineapple, the popular fruit belonging to the family of the Bromeliaceæ. This vegetable digestive ferment was first discovered by the South American chemist, Dr. Vicenté Marcaño. He found that the juice of the Bromeliaceæ possesses the precious power of digesting meat and of converting albuminoids into peptone. The fibre of the beef, freed from fat, is emulsified, whilst the salts and extractive matter remain unmodified. The dried and finely ground product, represents a fine brownish powder, which is entirely free from every repulsive odor, and does not possess the unpleasant taste of most peptone preparations. On the contrary, added to soups and chocolate, it has a very pleasant taste, and mixes readily with the former, if by careful stirring it is evenly distributed in the liquid. Ordinarily a teaspoonful of Beef Meal, equaling 8. grammes in weight, corresponds to 48. grammes of beef, and is sufficient for the meal of an adult. Mosquera Beef Meal accordingly replaces beef, with all of its nntritive elements, and, thanks to its vegetable digestive ferment, is much more easily and readily assimilated than the ordinary meat-foods and soups. The experience of the writer with Mosquera Beef Meal, thus far has been very favorable, as will be shown by the following cases:

I first had occasion to use the Beef Meal in a case of acute pneumonia. The patient, a man of 30 years, was much exhausted, and had an invincible repugnance to all food. The first trial with a portion of Beef Meal, as an addition to a plate of oatmeal gruel, proved favorable beyond expectation. Patient ate it apparently with appetite, and called for Beef Meal several times daily. He stated that after partaking of it, he felt most agreeably refreshed and strengthened, and his convalescence proceeded rapidly.

A second case was that of a man 68 years old, who had been seized with severe peritonitis. The great difficulties attending nourishment in this disease were materially lessened by the employment of Mosquera Beef Meal. The patient was given thrice daily 10. grammes of Beef Meal, added to oatmeal gruel, and ate it with relish. After the fourth day of treatment, the patient received, together with Beef Meal, also Mosquera Beef Cacao—a mixture of Beef Meal with fine cacao and sugar. This preparation is intended to impart a pleasant variety to the monotonous soup-diet, and completely fulfilled its purpose in this instance. The final recovery of the patient must in great measure be attributed to the invigoration of the organism, resulting from the ready digestibility of the Mosquera preparations.

In a third case, a 10-year-old girl was suffering from diphtheria, and for eight days had resisted every mode of nourishment, becoming very debilitated in consequence. The first trial of a cup of Beef Cacao proved unexpectedly favorable, the patient taking the nourishment with visible pleasure, and calling twice for the beverage during the same day. The strength of the patient increased from day to day, so rapidly that she was soon pronounced cured.

I have, furthermore, employed the Mosquera preparations in two cases of carcinoma of the stomach, in three cases of inveterate vomiting in pregnancy and, finally, with a typhus-convalescent, uniformly obtaining the same good results. It was not refused by a single patient, as happens so frequently in the administration of other meat peptones. On the contrary, my patients praised the pleasant, refreshing taste of the Beef Meal and Beef Cacao; the latter seemed to be especially beneficial to convalescents and children suffering from severe stomachal and intestinal affections. Mosquera Beef Meal proved of particular virtue in the gastro-enteritis of children, in which, as is well known, the irritability of the stomach is so great that everything taken by the little patient is at once ejected. The chief danger to the life of the child lies in the persistence of this vomiting. It impedes the absorption of nourishment in a great degree, and not seldom renders it impossible when everything given is at once evacuated *per os.* Besides, the existing plethora of the mucous membrane becomes ominously aggravated, resulting in exhaustion of the organism, to which the child sooner or later succumbs. It is evident that in this condition the sensitive mucous membranes of the stomach and intestines can exercise no digestive action; hence, the food to be given

must by all means be light, readily assimilable, and withal nutritious and strengthening. These requirements are all fulfilled by Mosquera Beef Meal and Beef Cacao. If a little rice-water be added to the Beef Meal, this nourishment will last for days, and the child may be thus sustained. For very weakly, emaciated children, Beef Cacao would be more fitted, because on account of its sweet taste it appeals more to the childish palate.

In conclusion, I would direct attention to the fact that Beef Meal forms an excellent nutriment in advanced phthisis. In this disease, good results are achieved by "forced nutrition," as it is termed by Débove of Paris, who first proposed it. Supported by the fact that loss of appetite, and repugnance to all forms of food, in many cases renders the access of nourishment almost impossible, and contributes to the defective digestion of what *is* eaten, Débove inquired (L'Union Méd., 3d series, 1881) whether these evils could not be evaded by the direct introduction of nutriment into the stomach by aid of a tube. By way of experiment, an emaciated phthisis patient was chosen, suffering from complete loss of appetite, and, after preliminary lavage of the stomach, one litre of milk was introduced with the tube, and this quantity increased the following day. In the future it would be well to employ Mosquera Beef Cacao in "*gavage*" or forced feeding, chiefly because pure milk is not always obtainable, especially in the large cities, and because its daily use produces repugnance.

Taken all in all, Mosquera Beef Meal may well take the foremost place amongst modern dietetic preparations. My colleagues are therefore invited to experiment with it in proper cases.

Erfurt, Germany.

THE NERVOUS SEQUELÆ OF INFLUENZA.

BY HAROLD N. MOYER, M. D.*

That pronounced nervous symptoms may follow the "*grippe*," is amply attested by the numerous cases that have presented themselves after the two severe epidemics of influenza in this city. I have had opportunity of studying these phenomena in sixteen cases, and it is entirely upon this material that the conclusions of this paper are formulated.

It is needless to say that a true ætiological differentiation is in many cases difficult, if not impossible, as it is apparent that an attack of influenza, and some nervous disease, may be coincident phenomena, not necessarily associated as to cause and effect. Then, again, influenza may act as a predisposing or existing factor in the production of nervous diseases. These sources of error have been kept carefully in mind in the preparation of this paper, which has resulted in rejecting numerous cases in which the ætiological relation was not well shown.

At the outset, it may be well to state the views held by the writer regarding the relation of infectious disorders to the nervous system. They naturally divide themselves into two groups: The first include those disorders that are, so to speak, the outgrowth of, or are grafted upon, the impaired nutrition caused by infectious diseases in which the nervous system shares, but generally not to a greater degree than other tissues: Second, those cases in which there is a direct poisoning of nerve centres or trunks by germs or their products, the changes in the tissues being usually inflammatory in character. It may not be possible to assign each case to the proper class, but a study of any considerable number will show that the above division is practicable, and useful. To illustrate this point, we may take a convalescing case of typhoid; the profound disturbance of nutrition is apparent in the wasted and generally ill-nourished condition of the patient. If we examine the fingers, we find a transverse groove across each finger-nail, showing how seriously the nutrition of the epithelial cell is impaired. We must not loose sight of the fact that this same nutritional failure is stamped upon the nerve cell, and indeed upon all the cells and tissues of the body. It is this nutritional disturbance that makes the convalescence from acute disorders such a fruitful soil for the development of nervous diseases. To the second class, diphtheria furnishes many

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typical examples. In diphtheritic paralysis of an extremity, we have the direct effect of the poison focused upon the nerve trunks or cells in the spinal cord. This local trouble may be out of all proportion to the severity of the disease; in some cases extensive and lasting paralysis may follow an attack so slight as to cause but trifling nutritional disturbance; and again, the most severe cases may not be followed by any local nervous disorder.

With this statement of the pathology, I may pass directly to a consideration of the cases which forms the basis of this paper.

In twelve were had phenomena that may be classed under the first head, that is functional nervous disorders, primarily dependent upon altered nutrition; in the two remaining ones, the "*grippe*" acted as an exciting cause, but was not directly responsible for the lesions. Of the second group in my classification, I have not seen a single case resulting from the influenza, with the possible exception of one given below; and no cases that could be compared to the local nervous disorders present in diphtheria, or that follow the exanthemata. From this fact alone, I conclude influenza is not a microbic disease, but rather due to prevalent meterological conditions. It may be insisted that failure to observe cases is not conclusive evidence that they do not exist. I can admit the force of this argument, but it is at least a fair inference that in a large clinic in which cases of local nervous disorders from infectious diseases present themselves weekly, such cases would appear, if they existed, particularly after an epidemic as severe and protracted as that of the late influenza. It seems to me as though this absence of direct poisoning of nerve trunks and cell, is one of utmost interest, and one which explains why the germ of influenza has not been found.

In regard to the cases, it is hardly necessary to go into an extended description of each, as twelve were typical cases of neurasthenia not differing materially from those due to other causes. They were as a rule attended by a greater degree of prostration, severe neuralgia, and always severe headache. I think the headache and prostration were markedly greater than in the average case of neurasthenia.

One or two of these cases merit special description, because of the severity of the symptoms and the great prostration. In one the disease had lasted for nine months, and was the direct sequence of imperfect recovery following influenza. In this case there were alarming and frequent attacks that closely resembled syncope. An examination of the heart did not reveal any circulatory changes. Another case was one of protracted and severe neurasthenia in which there were epileptoid attacks. These were not mere periods of depression, but decidedly epileptic in character. Another was one in which there were syncopic attacks of depression in which the pulse rate would fall to 40 and less per minute. The remaining cases were of the ordinary type, and do not require special description. In all depression was marked, and in the two cases mentioned was greater than I have ever observed in neurasthenia from other causes.

The following case, one of insanity, is the only one I have seen, and one that by the character of the symptoms goes far to prove my assertion that the nervous troubles of influenza are primarily disorders of nutrition:

A canvasser, 69 years of age, of previous good health but intemperate habits, was taken with a severe attack of the "*grippe*," in which head symptoms largely predominated. This was followed by heaviness, vertigo, incoherence, and unsystematized delusions. As these symptoms passed off he became decidedly melancholy, but finally recovered.

A. B., a strong, vigorous laboring man, aged 34, was taken with a severe attack of the "*grippe*," accompanied by pain in the head. This was immediately followed by an attack of ataxic aphasia. There was a subjective sense of weakness on the right side; the patellar tendon reflex was increased on the same side; locomotion, coördination and sensation normal.

S. B. has left-sided hemiplegia dating from an attack of the "*grippe*." She is 35 years of age, of previous good health.

In these two cases it is important to inquire into the relation of the hæmorrhages or embolism—for such they undoubtedly were—to the influenza. All predisposing causes of cerebral hæmorrhage were care-

fully excluded. There was nothing in the antecedents of the patients that would lead one to think of apoplexy or embolism. It is a fair inference that, if there were predisposing causes of arterial rupture, the additional strain in influenza of high arterial pressure upon the vessel walls might have caused them to give way. Then it is possible that changes may be produced in the blood causing it to coagulate in the vessels, thus forming a thrombus, as was shown by Silbermann (Centralblatt für Klin. Med., January, 1889), that general or local thrombosis may occur from the injection of substances into the blood. He raises the point as to whether some of the substances commonly observed in the course of acute diseases, and also those attending some toxic disorders, may not be due to thrombosis.

In this paper I have carefully excluded all doubtful cases, and those in which the nervous symptoms were not more marked than we should expect to find in any moderately acute disorder.

The following conclusions are, I think, justified by experience, and a careful study of the material at my command:

The nervous sequelæ of influenza are mainly due to disturbance in the nutrition of the nerve centres, and are usually functional in character. The direct lesions so often found after diphtheria, the exanthemata and other infectious disorders, are wanting.

Neurasthenia is by far the most frequent disorder following influenza, and is usually accompanied by severe pain and great depression, but differs in no other respect from those cases in which the cause is to be referred to traumatism, emotional disturbance, or other factors.

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DEFLECTIONS OF THE NASAL SEPTUM.

BY J. P. THORNE, M. D.

The frequency of deflections of the nasal septum, the unpleasant and undesirable results of the condition, and the success of its treatment, make the study of the deformity of practical interest and importance. This is one of the most common of nasal obstructions causing symptoms which are interpreted by the patient as "catarrh."

Attention was first called to septal deviations by Quelmalz in 1750, and different practitioners, up to the present time, have presented the results of their observations on the skull and cadaver, while reports of clinical experience have added to the fund of information.

A number of prominent observers state that 75 per cent. of all skulls have a prominent deviation. Zuckerkandl found deflections in 140 out of 370 crania examined. Loewenberger, after inspecting a large number of skulls, found only one out of every seven septa to be straight. Mackenzie, in an examination of 2152 skulls, found deviations in 1657. It is a curious fact that the higher the civilization and intelligence of a people, the more frequent is this deformity; the proportionate number of asymmetrical septa in the aborigines of Africa, America and Australia is small.

Different classifications, more or less complex, have been made by different writers, but the following simple arrangement embraces the majority of cases:

First.—Deflections of the bone and cartilage, or either one, to the right or left:

Second.—Sigmoid deflections:

Third.—Buttresses or spurs, usually osteocartilaginous, but may be either bony or cartilaginous.

The causes of septal deflection can be conveniently classified under the following heads:

1. Traumatism, before, during, or after birth:
2. Congenital:
3. Abnormal growth:
4. Imperfect development:
5. Constitutional dyscrasiæ.

Traumatism is by far the most frequent factor in production of this condition; this opinion is held by all rhinologists who have had best opportunities for clinical observation. A large per cent. of cases originate in a blow or fall upon the nose, at some time during infancy or childhood; this causes a bend in the septum which may not be noticed at the time, but as the parts develop, it results in a nasal obstruction with the accompanying symptoms. Bosworth maintains that the original injury causes a low grade of inflammatory action, which results in the

formation of a spur. This view is supported by carefully observing a series of cases. All cases of traumatic origin have more or less thickening at the point of deviation, which must be the result of an inflammatory process; microscopical examination of portions removed, gives distinct evidence of such inflammatory action. Direct fracture of the septum causes a class of cases in which the ætiology is clear. Fractures may be received at any period of youth, or adult life, and result in the condition; and they may be of any character and occur any where. They may or may not be associated with dislocation of the vomer.

The congenital origin of some cases is well demonstrated. A few present a family history, showing this condition to exist in several generations. We often find the deviation is accompanied by very little, if any, thickening.

Under the head of abnormal growths, I include a number of cases which can not be properly classed with the others. Some slight irritative lesion starts an inflammatory process and cellular proliferation, which results in a spur. Many cases of so-called "ecchondromata" are nasal deflections of this character.

Imperfect development includes a number of cases. A number of writers claim a highly arched palate, as it grows, crowds the septum and causes deviation. Lennox Browne expresses this condition as, "a want of correlation between the growth of the septum and the rest of the bony framework."

Constitutional dyscrasiæ, as rachitis and syphilis, are regarded by some as ætiological factors. A few cases may have such origin, but in the majority, where this assertion is made as to the origin of the deflection, the constitutional disease is coincident and not causative.

Frequently septal deflection can be recognized by external deformities of the nose. Various degrees of lateral deviation of the tip, and sometimes of the whole nose, show the existance of the septal deformity. In deflections due to violent injury, the bridge may be depressed; occasionally the deflection is so great as to press out the ala so as to be noticable. The most prominent symptom is that of nasal stenosis with its attendant sequelæ including the peculiar facial expression which results from the different forms of nasal obstruction; this causes hypertrophic changes in the mucous membrane of the nose, and gives rise to catarrh. Bosworth regards this as the most frequent cause of hypertrophic rhinitis. I can not do better than to quote his own words in this connection: "I regard septal deformities as responsible, in the large majority of cases, for the whole train of symptoms, direct and indirect, which are embraced under the very general term of chronic nasal catarrh, or to give it a more specific name, chronic hypertrophic rhinitis."

As a frequent result there may be pharyngitis, laryngitis, bronchitis, asthma, hay-fever, and other reflex phenomena; also aural complications. The tone of the voice is often altered when a deflection exists. Persons having septal deflections are subject to frequent colds, which are persistent and slow in recovering.

Diagnosis is made by means of the rhinoscope. When examined the deformity is detected by the prominence of the protruding convexity, and the concavity which is usually present on the other side. By means of the probe the character of the deflection, whether bony or cartilaginous, can be determined. An examination of the throat shows a condition of chronic inflammation. Deflections are easily differentiated from nasal polypus. Polypus is of a pearly color, and movable and soft when touched with a probe, while a deflected septum is red, hard, and immovable. A fibroma is also movable when touched with a probe.

Surgeons at different times have advocated a variety of operations for the removal of septal deflections. I shall not attempt to describe all of these, but present those which, from clinical experience, I believe of most value.

In the vast majority of cases the sawing operation is the best. The saw readily cuts through both the bone and the cartilage, and leaves a smooth surface which easily heals. Cocaine gives sufficient anæsthesia, so that the operation can be performed with little or no pain. The instrument used should be a nasal saw, five inches long, with a cutting surface of three inches, and about one-eight of an inch wide. The blade should be as

thin as possible without impairing its strength. I prefer a saw which cuts *on the pull*, as its movements can be better controlled. The details of the operation are as follows:

The nasal passages should first be thoroughly cleansed with antiseptic spray, then with a ten to twenty per cent. solution of cocaine hydrochlorate. After this a pledget of cotton saturated with a twenty per cent. cocaine solution is placed on the deflection, and in a few minutes the field of operation is thoroughly anæsthetized. The deflection is now rapidly sawn off, cutting from above downward. Occasionally it is difficult to introduce the saw above; then the sawing can be done from below upwards. With good light, every movement of the saw is in sight, and a straight, clean cut can be made. If the mass to be removed is not completely severed, it can be removed with the forceps or wire snare very easily. The septum quickly heals after the operation, and when a straight cut is made there is no danger of a septic condition of ulceration.

Occasionally cases are met where the accompanying thickening of the septum is very small; this is especially true when they are of congenital origin. In this class of cases, the operation by Steele's cutting forceps is preferable. An improvement in Dr. Steele's instrument, at present, is a shield fitted over the knives; the instrument can thus be inserted in the nostril without cutting or lacerating the tissues. Dr. Jarvis' modification of Steele's instrument has the advantage that the knives are removable, thus the operator can have knives of any size or character made and applied to the instrument.

The operation is performed as follows: The nose is prepared as in the sawing operation. The blade with the knives is inserted in the unobstructed nostril, and the shield withdrawn; the other blade is placed in the obstructed side. The forceps are then locked, and forcibly closed, cutting completely through the septum. The septum is then crowded into its proper place and a soft rubber nipple placed in the nose, well crowded back, and packed with cotton. This holds the septum in place and prevents hæmorrhage. In five or six days the plug is removed, the nose thoroughly cleansed with an antiseptic solution, the plug cleaned and replaced, or a new one inserted, and allowed to remain in place for five or six days longer. At the end of this time a hard rubber plug is inserted, and should remain in the nose for about two weeks.

In some instances it may be necessary to have the patient under the influence of a general anæsthstic. Then the patient is placed on an operating table with head near the edge. After the cutting, the head is held over the edge of the table so that the blood may escape, and not enter the larynx.

Although the above operations are effectual in removing all classes of septal deflections, I shall mention two others which are advocated to-day.

Lennox Browne recommends the forcible dilatation of the nasal choana with a powerful dilator working on the principle of a glove stretcher. He reports pleasing results, and that the crushing of the turbinated bones and bodies, and fracture of the outer wall of the nasal fossa, which sometimes happens, causes no troublesome symptoms.

Removal of deviations by means of burrs or trephines run by an electro-motor, is a procedure used by a number of operators in this country and Europe. Seiler advocates the use of burrs of various forms, and has the support of a number of prominent operators.

Amboy, Ill.

INSOMNIA OF TOXIC ORIGIN.

BY E. P. HURD.

The natural effect of alcohol on the cerebral functions is to impair healthful sleep. It excites the cerebrum by increasing the heart's action and the blood-flow, and by directly stimulating the cortical cells concerned in conscious activity. This is the ordinary action of alcohol when taken moderately, the effects of liquors being, as a rule, the less baneful the less impurities they contain, and the nearer they approach by rectification or by age to the type of pure ethyl alcohol.

It is possible that the stimulant effect of the alcohol on the stomach, rendering that organ hyperæmic, may sometimes promote sleep by temporarily anæmiating the brain. On the whole, however, alcohol is a most unsatisfactory hypnotic, and the sleep which.

attends its ingestion is generally brief, and followed by a period of wakefulness later on.

It is by no means proved that alcohol in any form ever fulfils the prime requisite of a hypnotic, that of lessening the amount of blood in the brain. The stupor which follows small medicinal doses is regarded by many authorities as a minor degree of that narcosis which comes on after excess. Into this narcotism enter as factors the toxic effects of the alcohol on the cerebrum, vaso-motor paresis, and the paralyzing action of blood poisoned by carbonic acid, whose retention is due to interference with the respiratory function. Juillet, moreover, has shown that the blood globule, when impregnated with alcohol, loses the property of transforming all its hæmoglobin into oxy-hæmoglobin; for the oxygen of respiration unites at the same time with the alcohol and the hæmoglobin of the corpuscles; in other words, the alcoholized blood becomes too poor in oxygen to properly subserve either nutrition or function of the cerebral cells. These considerations show how complex is the action of alcohol on the brain, and the necessity of caution in prescribing it in derangements of sleep. Certainly, the continued use of alcoholic stimulants, even in moderate doses, for hypnotic effect, is likely to defeat the purpose for which the remedy is given, by producing in the end a very obstinate insomnia, if we can trust some recent authorities; and this it does by inducing a permanent loss of tone in the cerebral blood vessels, if not by favoring arterio-sclerosis. "The effect of alcohol on the brain," says B. W. Richardson, "is to produce and maintain the relaxation of its vessels, to keep them charged with blood, and so hold back the natural repose. Under this divergence from natural life, the sleepless man lies struggling with unruly and unconnected trains of thought. * * * The more he tries, the less he succeeds, till the morning dawns." Richardson affirms that arterial atheroma is a frequent consequence of even moderate indulgence in alcoholic beverages, and doubtless there is much testimony in support of this contention. As for the effects of long continued intemperance, there is no doubt this is one of the most prolific sources of arterial degeneration. Nor is even beer exempt from harm of the same kind, and there is warrant for the belief that "the use of beer in many instances produces a species of degeneration of all the organs, profound and deceptive fatty deposits, diminished circulation, conditions of congestion and perversion of functional activities; local inflammations of both liver and kidneys are always present. Intellectually, a stupor amounting almost to paralysis arrests the reason, changing all the higher faculties into a mere animalism, sensual, selfish, sluggish, varied only with paroxysms of anger that are senseless and brutal. A writer in the Scientific American, who makes this assertion, claims a wide observation of the effects of beer drinking among the various civilized nations.

But the point which we wish here to emphasize is, that the moderate use of alcohol, in any form, may produce insomnia by its exciting action on the heart and circulation, and on the cerebral cells; that the use of it as a hypnotic may, in the long run, defeat the end for which it is given, and that prolonged, immoderate indulgence, even in the milder intoxicant beverages, may produce grave cerebral disturbances, and such as are incompatible with healthful sleep.

The remedy for alcoholic insomnia is that of alcoholism in general—the most complete abstinence from the toxic cause. Prolonged mental rest, the natural vaso-motor tonics, out-door air, massage, invigorating exercise, cold bathing, and perhaps sea bathing, are indicated, and a nutritious diet adapted to the enfeebled state of the digestive organs. These patients are often benefited by a prolonged course of strychnia. One-thirtieth of a grain may be given three times a day, or ten drops tincture of nux vomica, just before meals. Hypnotics will be temporarily needed; chloral, or paraldehyd. The combination of twenty grains of chloral with twenty drops of tincture of capsicum, in two fluidounces of chloroform water, is a good one.

Physicians are seldom called upon to treat insomnia due to tea drinking or coffee drinking. The number of those who abuse these beverages is probably small, and the congenitally feeble and neurophatic early learn by experience to indulge spar-

ingly in them. The tea-drinking malady is characterized by "sleeplessness, or sleep disturbed by dreams or night-mare, headache, irritability of temper, depression, hypochondriasis, disorders of special senses, auditory and visual disturbances, neurosal palpitation, dyspepsia, intestinal torpor (with the accompanying flatulence and constipation), neuralgia, muscular enfeeblement, and tremor." (MacFarlane.)

Insomnia is a frequent consequence of excesses in the use of tobacco. This is brought about, partly, by the digestive and circulatory troubles which characterize chronic nicotinism.

But the nervous centres are most violently smitten, especially the medulla oblongata, whence the cardiac, circulatory, and respiratory disturbances. The direct excitant influence of nicotine on the cortical centres is considerable; the existence of vaso-motor paresis is undoubted.

Entire abstainance is the only remedy; the poison is quickly eliminated. It has been found that the wakefulness is lessened by four gramme doses of monobromide of camphor at night (MacFarlane), but any of the milder hypnotics may be administered.

The only other toxic agent necessary to allude to, is opium. Opium and morphine may almost be said not to deserve a place among true hypnotics, so little do they bring about the conditions of normal sleep. It is known they render the cerebrum hyperæmic; they paralyze the vaso-motors, and act upon the nerves which supply the respiratory muscles so as to interfere with the process of respiration (W. A. Hammond); hence, the sleep which results from their use is more like stupor than natural sleep.

A most obstinate and unmanageable insomnia attends the opium or morphine habit, for the cure of which special treatment is necessary (especially in aggravated cases), and, generally, isolation in an institute possessed of properly trained nurses, and where restraint can be exercised.

The literature of morphinism is now quite extensive; prominent among works devoted to this subject are two treatises lately published, one by Regnier, the other by Oscar Jennings.

In breaking off the habit, Jennings declares in favor of the gradual method; and in conjunction with Professor Ball, he has made some careful experiments on the power of sparteine and nitro-glycerin to combat the circulatory disturbances which attend the period of amorphinism.

Newburyport, Mass.

Correspondence.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with $5 for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary in order to obtain membership. On receipt of the above amount, the weekly Journal of the Association will be forwarded regularly.

RICHARD J. DUNGLISON, Treas.

ANNOUNCEMENT OF THE INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.

At the meeting of the American Medical Association held at Washington, May 5th, 1891, Dr. Charles A. L. Reed of Cincinnati introduced the following:

Resolved, That the American Medical Association hereby extends a cordial invitation to the medical profession of the western hemisphere to assemble in the United States in an Inter-Continental American Medical Congress.

Resolved, That the Committee on Nominations be, and is hereby, instructed to nominate one member from each State and Territory, and one each from the Army, Navy, and Marine Hospital Service, who shall constitute a Committee, which is hereby instructed to effect a permanent organization of the proposed Inter-Continental American Medical Congress, and to determine the time and place at which the same shall be held.

The resolution was seconded by Dr. Wm. H. Pancoast and others, and unanimously adopted.

A Committee was nominated and elected, of which Wm. T. Briggs, M.D., was appointed President, and Wm. B. Atkinson, M.D., Permanent Secretary.

The Committee appointed by the American Medical Association to effect a permanent organization of the Inter-Continental American Medical Congress, met at "The Arlington," Washington, May 7th, 1891.

The following officers were elected: Charles A. L. Reed, M.D., Cincinnati, O., Chairman; J. W. Carhart, M.D., Lampasas, Tex., Secretary; I. N. Love, M.D., St. Louis, Mo., Treasurer.

On motion, the officers were appointed a special committee to draft a constitution, and report the same at an adjourned meeting of the General Committee, to be held at St. Louis, Mo., Wednesday, October 14th, 1891, when the time and place of meeting of the Congress will be decided, and permanent officers elected.

CHARLES A. L. REED, M.D.,
Chairman.

J. W. CARHART, M.D.,
Secretary.

PREPARED CHALK IN THE DIARRHŒA OF TYPHOID.

Editor MEDICAL AGE:

At this season of the year, suggestions on the treatment of diarrhœa are seasonable. Recently, while treating an obstinate diarrhœa of typhoid fever, after failing with opium and astringents, *per orum* and *per anum*, I resorted to chalk enemas, with prompt and good results. I used prepared chalk in about the consistency of thick cream; this speedily formed a cast in the rectum, and was retained something over sixteen hours. I repeated the treatment, as required. I have since made use of the treatment in cholera infantum with good results.

Respectfully, etc.,
M. J. YOUNG, M.D.

St. Clair, Mo., Aug. 10th, 1891.

CONGRESS OF HYPNOTISM.

The annual meeting of the French Society of Hypnology was held in Paris on July 20th and following days. M. Bernheim opened a discussion on the connection between hysteria and hypnotism; he combated the idea that the two conditions were identical, or even analogous. He stated he had been able to hypnotize sixty-nine patients out of seventy-two under his care for various diseases, and urged that it was absurd to suppose that so huge a proportion could be hysterical. M. Bérillon followed with the statement that almost all children could be hypnotized, except those who were idiotic or hysterical.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., AUG. 25, 1891.

Editorial.

WHY DOES QUACKERY SUCCEED?

Physicians who struggle for subsistence, practicing their profession in accordance with its ethical requirements, are sometimes discouraged by the ill returns for their labor, when compared with the flourishing business done by many without the pale of scientific medicine.

The Lancet, (London) in discussing editorially the popularity of a certain specific plan of treatment employed by a priest named Pfarrer Kneipp, declares the real cause of the success of such men to be the faith they inspire in their patients.

A recent writer in Blackwood's Magazine, gave an account of this system of hydropathy, which is practiced at Wörishofen, by Kneipp. This system has enjoyed for some years much local celebrity, and the recent visit to Wörishofen of Baron Nathaniel Rothschild, has naturally contributed materially to enlarge the sphere of its notoriety. The Continental mind seems to contemplate and embrace the ideas of panaceas and "cures" with a readiness to which Englishmen are strangers. There is the "grape-cure" at Montreux and Meran; there are "milk-cures," "whey-cures," "air-cures," and "water-cures," at places too numerous to mention, each boasting its triumphs, and each possessing its devotees. We are by no means disposed to question the utility of many of the methods practiced at such resorts, but can only look on in wonder when people of education and intelligence are so led away by the *vox populi* as to imagine that any single remedy can be adapted to all the innumerable phases of disease, or that sundry daily ablutions, or the imbibition of certain quantities of mineral

water, milk, or whey, can solve all the most abstruse problems in therapeutics.

It would appear that Pfarrer Kneipp was in youth the victim of disease which threatened his usefulness and life, and that he accidentally stumbled upon a little volume treating of the virtues of cold water. He practiced the precepts of this volume for a long time without benefit, but finally with complete success; and henceforth he became the apostle of the principles which had proved so efficacious in his own case.

So far as we can learn from the writer in Blackwood, there is nothing very original or distinctive in his methods. He employs the *Oberguss*, or douche, and the *Wickel*, or cold pack; he encourages patients to take abundant fresh air exercise, bareheaded and barefooted; he insists on a frugal diet; he employs little medicine, but uses such simple herbs as rosemary, fennel, gentian, mullein, rue, shave-grass, cowslip, and sage. "He lays great stress on linen underclothing, and strongly advocates a particular make of linen, of coarse yet porous fabric, as specially adapted to the requirements of the human body." We are informed his attention is principally directed to the circulation, and that he seldom attacks the local evil, preferring to strengthen the whole system. Unlike most irregular practitioners of medicine, Pfarrer Kneipp seems to be a most disinterested person and indifferent to riches. "In business matters he is innocent as a child, the fees he accepts being barely sufficient to keep him from being an actual loser by his charity." In one case his fee for an attendance of five weeks was only ten marks; in another case only six marks were demanded for a course of treatment extending over two months. Over a thousand patients, we are told, were continuously at Wörishofen last summer, while scores of cases come daily from Munich for consultation. The priest sees not less than two hundred patients daily, and naturally has difficulty in finding time to say mass and read his breviary. In spite, however, of this press of suffering humanity, "Pfarrer Kneipp does not for one moment lose sight of his real work, and is indefatigable in all the branches of his ministry."

The above somewhat idyllic account leaves much to be desired on the score of scientific precision. No definite information is given as to either the diagnosis of the cases in which marvellous cures are alleged to have been effected, or of the details of the treatment adopted. For the ordinary methods of diagnosis, the worthy Bavarian priest would seem to substitute something in the nature of intuition or inspiration. "Instead of fixing his eyes straight upon the patient as he speaks, they are slightly upraised, as though beholding something unseen, and drawing from the above the inspiration which would dictate his answer. . . . He asks few questions, and refuses to listen to any long-winded account of symptoms, but gives his instructions with a briefness and rapidity quite bewildering to the uninitiated." Some of the particulars related by the writer are amusing in their naïve suggestiveness. "The window-sills of Pfarrer's lobby were heaped with huge bundles of herbs, which shed a faint aromatic odor thoughout the atmosphere, while bottles containing liquid decoctions of the same stood about promiscuously; and although I never saw a label or ticket upon either bundle or bottle, yet Pfarrer did not seem to find the slightest difficulty in identifying his remedies. Likewise his *soutane* pockets seemed endless in their resources, apparently harboring the contents of an apothecary's shop; for, frequently consulted by patients in the village street or on the road, he invariably happened to have about his person the precise remedy demanded by their condition!"

We seem here to be in the region either of totally inert substances, or of the cure-alls and heal-alls with which quack literature so largely abounds. The amazing point is that an intelligent writer can relate such circumstances without any realization of the obvious inference to be drawn from them. Towards the conclusion of the article, however, the writer shows some glimmering apprehension of the true explanation of this tale of thaumaturgy. The German doctors, we are told, "while unable to deny the great and wonderful cures which have been effected by Pfarrer Kneipp, pronounce his treatment to be purely negative, maintaining that equal results might in each case be obtained by any other doctor with the simple auxiliaries of cold

water, frugal diet, and rational exercise." Our informant continues: "We are fully prepared to admit the truth of this last assertion, and are willing to prophesy like success to any physician who can induce his patients to believe in him with the same unerring faith, and obey him with the same blind confidence, which characterize the disciples of Pfarrer Kneipp. Here, then, will (in my opinion) be found to lie the true secret of his fame. It is less a question of a particular system, or mode of treatment, than of direct personal influence of a powerful individuality which, imposing itself on thousands of suffering fellow creatures, has won their confidence and compelled their submission." We are inclined to accept this explanation of the Wörishofen "cures," while allowing great importance on the negative side to the abandonment by patients of many evil habits, and on the positive side to their adoption of those primary conditions of healthfulness—viz., simplicity of diet, ample fresh air, exercise, and suitable clothing.

IS TYPEWRITING INJURIOUS TO THE EYES?

In this age of typewriters, the question suggested is one of interest, at least to eye specialists.

In a letter to the New York Medical Times, Dr. Geo. L. Freeman discusses the fallacy of the current opinion that typewriting is necessarily injurious to the eye.

As indicative of what expresses the preent opinion, we quote the following paragraph which has been going the rounds of the medical press:

Almost every typewriter, sooner or later, has trouble with her eyes. The typewriting machine is supposed to save the eyes, but the effect is quite the contrary. The eyes are all the time in motion while writing, and the rapid jerking of the eye from one point to another on the little keyboard soon tires the muscles and makes the eyes, and sometimes the whole head, ache. Then a great many girls have the habit of turning up the carriage to see what has been written, and leaning back in the chair while reading it. This, too, is bad, for the reason that it requires a rapid adjustment of the eye to the different distances, and so tires the whole organ. The only way to save the eyes when using a typewriting machine is to acquire such facility that it is not necessary to look at the keyboark, and the eyes will be saved the thousands of little jerks to and fro which do so much harm."

Dr. Freeman then cites his own experience as follows:

I have been using a typewriter for about ten years, and during the latter half of this period with the left hand alone, the right hand being disabled. I was first led to try the machine by reading a very emphatic testimonial in its favor by the eminent English ophthalmologist, R. Brudenell Carter, who stated he had found it of the greatest assistance to himself, and especially recommended it in cases where the sight was weak or imperfect in any way. This should be almost enough to settle the question, even if the above quoted objection founded on *eye-jerking* were not so palpably nonsensical. But I would invite the contribution of further evidence on this point, both from specialists and professional typewriters. I do not believe that "almost every typewriter has trouble with her eyes"—or *his*, either. Are not most people, while awake, constantly adjusting the organ to different distances, with as much rapidity as when looking at "the little keyboard?" From my own experience, I am firmly convinced that physicians, instead of finding fault with these admirable contrivances, ought to be the strongest advocates of their more extended employment.

THE TREATMENT OF ABORTION.

When called to a case of threatened miscarriage, the first duty of the physician will be to prevent this result, if possible. If there be little or no pain and flowing, he will prescribe rest in bed and an opiate—twenty drops of laudanum or one-fourth grain of morphine—with hope that uterine contraction will be suspended, that flowing will cease, and that the term of pregnancy will be completed. It is true that such a consummation, however much wished, is seldom realized. The existence of flowing is generally evidence of separation, either partial or total, of the placenta; and the presence of clots in the uterus is soon attended by contraction of that organ, such as would be produced by any foreign body; the result, sooner or later, will be the expulsion of the fœtus and its secundines. Therefore, while duty unquestionably dictates that all suit-

able means of prevention shall be first tried, such means generally fail, and it becomes necessary to help on the abortion to a safe termination.

The principles of treatment of unavoidable miscarriage are the following: 1, To moderate flowing: 2, To promote uterine contraction: 3, To clear the uterus of its contents: 4, To prevent septic or other untoward accidents.

With regard to the first indication, hæmorrhage is generally the first and most alarming symptom. In the earlier stages, and till complete separation of the placenta, it follows *pari passu* the pains, and is so profuse often as to be terrifying. There is no objection now to ergot, if it be considered desirable to re-enforce the pains; unfortunately, ergot cannot be relied on to check the flowing. Water, in large quantity,—a gallon, at least,—as hot as can be borne (118° F.), may be injected into the vagina by a fountain syringe; this will expedite delivery and moderate hæmorrhage. If there is likely to be much delay, thorough tamponing of the vagina may be practised. For this purpose, small antiseptic sponges, with strings attached to them, may be employed; the strings being allowed to protrude outside. Ordinarily, bits of wool or cotton batting are used; these are soaked in vinegar, and thoroughly packed in the vagina through a Sims' or other curved speculum. Tying strings to the pledgets, and allowing the former to dangle outside, facilitates removal. Often the physician will be obliged to employ strips of cotton cloth, placed so as to distend the vaginal fold and *cul de sac*. Dr. Penrose once, in a severe case of flooding, seized an apron from one of the attendants, dipped it in vinegar, and crowded it into the vagina of his patient, and thus stopped the flowing.

Thorough tamponing of the vagina is unquestionably one of the best means we possess of checking hæmorrhage in threatened miscarriage. With a little care and tact, the vagina can be so packed that no blood can escape. The blood accumulates in the uterus and facilitates separation of the fœtus and placenta, and softening and dilatation of the cervix. Moreover, the presence of the tampon in the vagina favors uterine contraction. Certain it is, that very often when the tampon (after from six to twelve hours) is removed, the os will be found thoroughly dilated, and the fœtus accessible if not loose in the vagina. Thus the three first indications will be found to have been fulfilled by the tampon.

Of late, there has been much written in favor of forcible removal of the fœtus when miscarriage is unavoidable. The patient is anæsthetized, the cervix forcibly dilated, and the ovum removed either by forceps or curette. The operation is done antiseptically, under a full stream of hot sublimate water (1-2000); after removal of the uterine contents, an iodoform pencil is carried up to the fundus uteri aud left there. There can be no objections to this method of treatment if done with proper care; and both physician and patient are saved any further anxiety and trouble. Physicians are generally disposed to be more conservative. The traditional method is to temporize, unless there be urgent reason for immediate interference. If the flowing has ceased, or nearly ceased, and the ovum has not yet presented, if there is no fœtor to indicate decomposition, no febrile heat, there can be no harm in waiting for the natural expulsive efforts to clear the uterus. The majority of cases, if left to themselves for a few days, come to a safe termination without help. The junior practitioner cannot, however, keep too much in mind the two great dangers, flooding and septicæmia. The flooding can be controlled by the tampon, septicæmia can be averted by forcible removal of the ovum and antiseptic injections.

To sum up the practice of many of our best modern authorities: When called to a severe case of threatened miscarriage, the physician will first endeavor to check flowing by tamponing the vagina. After a variable period of from six to twelve hours, he will remove the tampon. If the ovum is presenting, he will endeavor to hook his fingers around and remove it; this manœuvre failing, he may be able to seize it and remove it with a long pair of ovum-forceps. In case the ovum should still be beyond reach, he may find it necessary to tampon the vagina again; if flowing shall not have stopped, the tampon will not be necessary; now full

doses of ergot will be indicated; the physician will leave his patient for a few hours, or until summoned, with expectation when he returns, the fœtus and placenta will have been expelled.

But supposing that the pains are not sufficient to clear the uterus, and for a variable time—which may amount to several days—the fœtus or placenta remains undelivered? There is no doubt as to the expediency of surgical interference. This becomes imperative if there be the least fœtor, indicating putrefaction. Every hour of delay now jeopardizes the patient. The prudent physician will administer ether at once, place the patient in the lithotomy position, introduce a Sims' speculum, and irrigate the vagina and uterus thoroughly with hot sublimate water, saturated boric acid solution, or per oxide of hydrogen solution full strength. Then the uterus is drawn down to the vaginal orifice by a tenaculum, and if necessary, the cervix dilated till the curette can be introduced into the body of the womb. Curreting is then done thoroughly; an assistant at the same time irrigates the uterus with the hot antiseptic solution which is injected from the fountain syringe through a hard rubber catheter. By means of the spoon or wire curette the uterus can be expeditiously and thoroughly cleared of its contents. When the fœtal debris is all removed, the uterus is once more thoroughly washed out with the hot antiseptic solution, which should be injected till the water comes back clear, then a twenty-grain iodoform pencil is carried up to the fundus and left there. A tampon of iodoform cotton is placed in the vagina, and the operation is complete.

Twenty-five years ago, an operation of this kind would hardly have been though of, but is now practised every day, and the mortality from abortions reduced almost to *nil*. The physician who will let a patient die of septicæmia by retention of a dead fœtus or placenta, is guilty of nothing short of criminality. This at least is the stand now taken by the best obstetricians, and one from which we should not dare to dissent. In view of modern antiseptic methods, and the improvements in instrumental appliances and modes of operating, the physician of to-day must be prepared to assume responsibilities to which he of a past age was a stranger.

NATURE AND CAUSE OF SEA-SICKNESS.

Dr. S. Rosenbach, a Professor at the University of Breslau, has recently published a brief monograph presenting his conclusions from a ten years' study of this malady. An interesting review of the experience and observations of Dr. Rosenbach, appears in the British Medical Journal, July 25th, 1891.

The facts and theories formulated are:

1. The malady commences as soon as the vessel pitches, that is, rotates on its transverse axis.

2. The rolling, that is, rotation on its long axis, is less severe, but the combination of the two is very unfavorable.

2. The phenomena appear more quickly, and are more severe, the further the patient is from the middle of the ship. Persons sleeping are attacked, also small children and animals. In small boats without sails very sensitive persons may be affected; when sails are used, sickness is more likely to occur.

5. A moderate amount of food in the stomach, and a small quantity of alcohol, is more likely to act as a preventive than an empty stomach.

6. The horizontal position on the deck acts in some degree as preventive.

7. Anxiety and apprehension precede sickness. A certain exhibition of energy and resolution may, in short voyages, and with slight vessel motion, control the tendency to sickness. Soft winds (for example sirocco), strong odors, etc., are unfavorable.

8. There are two categories of the affection dependent on individual predisposition; in one the head, in the other the abdomen, is principally affected. Cases where both are affected are common.

In regard to intensity: (*a*) Some women begin to feel uneasy from the beginning of the voyage, in perfectly smooth conditions of the surface; they are pale, and have no appetite; there is a certain dread also. It is questionable if they are cases of sea-sickness; perhaps they represent the purely psychical form. (*b*) In another variety there is a general irritation of the nervous system during the whole voyage; the digestive organs are unfavorably affected. (*c*) This series forms a transitional variety. Slight motions of the vessel affect sensitive persons

and produce sickness, with general loss of appetite, indisposition to move to speak, and painful sensations in the head or abdomen. These symptoms are a delicate reagent to the disturbing action of the vessel.

As to the *theories* of the disease, they are arranged under three heads:

1. The psychical theory (so named by the author), according to which all the symptoms are produced through the action of certain sensory organs upon the consciousness, giving rise to uncomfortable or unwonted sensations of disturbed equilibrium.

2. The theory of disturbed equilibrium, according to which the permanent disturbances of equilibrium act as painful irritations to the contents of the skull and of the abdomen, and are thus the causes of the phenomena.

3. The theory of the disturbance of the circulation, according to which the disturbances of equilibrium and the swinging motions of the body produce circulatory disturbances in certain parts.

As regards the psychical theory, the arguments generally adduced in its favor are: (1) That the sight of the pitching vessel and of the up-and-down motions of the vessel, favor the occurrence of sickness: (2) That the abnormal effects do not occur with the eyes shut: (3) That sleepers generally escape. This conclusion the author rejects, for he states that energetic will and closure of the eyes do not quite succeed in warding off the attack.

The action of visual disturbances in inducing the sickness he considers very important, but only secondary as factors in the result. That the sufferer may be roused from sleep in a full paroxysm of the attack; that children at the breast, and young children, suffer, though less than adults; and that horses, who in their boxes do not see the movements, also suffer—prove that the external mechanical influences alone must be the cause of the sickness. These facts, on which the author seems to rely for his conclusions as to the secondary importance of visual disturbances, if in themselves correct, do not appear to demonstrate that visual disturbances were absent in the cases mentioned, and it is to be remarked that in a note the author speaks of closure of the eyes, or avoidance of the sight of the mast and bulwarks of the ship, as being of great assistance in preventing the attack.

The third theory—that of circulation-disturbances—the author rejects. The second theory is particularly developed, and the disturbing effects of various kinds of unwonted movement are described and analyzed. Thus, it is shown that backward travelling may produce illness, pain, even vomiting. The motion in swings, and the effects of circular motion, are next described. Upward or downward motion have been particularly experimented on by the author in rapidly-moving lifts or elevators, who thinks he has discovered a new and substantial explanation of the action of external movement impulse by the phenomena observed. It is found that in ascending with the eyes closed, no noise being heard, there is experienced a peculiar feeling at the epigastrium, which goes off during the rise, say, of four or five floors, but reappears the moment the elevator stops. The same thing occurs when the elevator moves downward, the sensation being felt only at the outset and on the arrest of the motion. In the motion of the elevator there occurs a sudden movement and sudden arrest of the movement, and the effect of this in producing epigastric disturbance is held to be analogous to the effect of the motion observed in a vessel at sea. This explanation furnishes a theory which the author accepts, because it covers the ground to the necessary extent. Further, he is led to the conclusion that the complex symptoms of sea-sickness are due to the molecular disturbances produced by rapid movements arising from sudden change of direction of the motion, whereby a severe intramolecular shaking and irritation, primarily acting on the cells and protoplasm of particular organs, is produced.

The immediate transition from one movement, to another movement in a different direction, is assumed to be the cause of the disturbances experienced. Thus the painful sensations in sea-sickness, in the act of swinging, in the oscillation liable to occur in rapid railway journeys, agree in this, that the peculiar symptoms of irritation, the distressing feeling at the epigastrium, the cold sweats, the general feeling of illness, and the head-

ache, appear at the moment when the direction of the movement changes.

The author considers that the only real cure is "custom." He speaks favorably of certain medicines as being often operative for very short sea voyages—quinine, analgesin, bromides, morphine, cocaine, chloral and other analgesics. He speaks with approval of the advice of older writers, that the horizontal position at mid-deck should be taken before the voyage begins, and a bandage tightly placed over the liver, whereby the intensity of the motion is diminished, and a certain degree of fixation of the abdominal contents promoted.

EHTYLEN BROMIDE IN EPILEPSY.

Upon the assumption that it is the bromine in bromide compounds that plays the more important rôle, Professor Donath has sought to avoid the disagreeable symptoms sometimes following the continuous administration of large doses, by substituting ethylen bromide; and although withholding for the present a final judgment, he reports good results in several cases. Ethylen bromide, $C_2H_4Br_2$, contains 90.9 per cent. of bromine; it has hitherto not found practical use in medicine, although on two occasions at least, the confounding of the name with *ethyl* bromide, is known to have led to fatal results. It is a liquid, sp. gr. at 21° C. 2.163, having an odor resembling chloroform, and a sweetish but subsequent burning taste. At 0° C. it solidifies to a snow-white crystalline mass, which melts at +9.5° and boils at 131° C. The liquid is insoluble in water, but mixes in any proportion with alcohol, and dissolves in fixed oils. On account of its insolubility in water it is administered in a 5 per cent. oily emulsion. The dose of the emulsion is 30 drops in half a glass of sugar and water, or spirit and water, two or three times daily, slowly increasing to 70 drops. For very delicate patients, gelatin capsules are recommended containing 3 drops of ethylen bromide and 6 drops of almond oil, of which two to four may be taken two or three times a day. It will be evident that if ethylen bromide comes into use, considerable caution will require to be exercised in prescribing and dispensing to avoid confusion between it and ethyl bromide.

Notes and News.

Monkey Talk.—

Prof. R. L. Garner furnished a paper to New Review (June, 1891), upon the Simian Tongue, in which he gives some details of efforts made to discover whether "articulate" speech prevails among the lower primates, and whether such speech, if existing, contains the rudiments from which the languages of mankind could easily develop. The result of these efforts encourages him to think it is quite possible to find proofs that such is the origin of human speech.

He concludes that the Simian tongue has about eight or nine sounds, which may be changed by modulation into three or four times that number; they seem to be half-way between a whistle and a pure vocal sound, and have a range of four octaves, and probably all chord with F-sharp on the piano. The sound used most is very much like "u"—"oo" in "shoot." The next one something like "e" in "be." No "a," "i," or "o," was distinguished. Faint traces of consonant sounds can be found in words of low pitch, but they are few and quite feeble.

The present state of speech has been reached by development from a lower form. Each race has its own peculiar language, slightly shaded into dialects, and the radical sounds do not have the same meanings in all. The words are monosyllabic. The phonic character of the speech of monkeys is very much the same as that of children in their early efforts to talk, except as regards pitch. It seems to obey the same laws of change and growth as human speech.

When caged together, a monkey of one species will learn to understand the language of another, but does not try to speak it. His replies are in his own vernacular, and to express his thought.

The Old New England Doctor.—

A writer in the Atlantic on "The Old New England Doctor," says: "I like to think of the rich and pompous old doctor riding out to see his patients, clad in his suit of sober brown or claret color, with great shining buttons made of silver coins. The full-skirted coats had great pockets and flaps, as did the

long waistcoat that reached well over his hips. Rather short were the sleeves of the coat, to show the white ruffles or frills at the wrist; but the forearm was well protected in cold weather by the long gauntlets of his riding gloves and by muffetees. Full knee-breeches dressed his shapely legs, while fine silk stockings and buckled shoes displayed his well-turned calves and ankles. But in muddy weather high leather boots took the place of fine hose and shoes, and his handsome breeches were covered with long tow overalls, or "tongs" as they were called. On his head the doctor wore a cocked hat and wig. He owned and wore in turn wigs of different sizes and dignity—ties, bags, periwigs and bobs."

Floating Hospitals for Surgical Operations.—

In these days of antiseptic surgery, the aim of the surgeon is to destroy all germs, so that no suppuration can occur in his wound. If he succeeds, other things being equal, his operation is a success. Now, it has occurred to me if it would not be better to select a locality for operation where germs do not exist; where there would be no necessity for their destruction because of their non-existence. We have been informed that in mid-ocean disease germs are very few, if not altogether absent, in the atmosphere. Following up this thought, it has suggested itself that a vessel, anchored ten miles out at sea, might offer the most favorable locality for surgical operations. There would be many drawbacks to such an idea; hence, from this ideal proposition we would deduce the practical idea that sea-shore localities, because of their comparative exemption from disease germs, would offer a locality most favorable for the performance of surgical operations.—Joseph F. Edwards, M.D., in *Med. Record.*

Drummers for Doctors.—

The Journal of the State Medical Society of Arkansas, in its "Miscellany" gives without comment or explanation, the following:

"List of Drummers for Doctors in the City of Hot Springs, Ark., to whom License has been Issued in Conformity to an Ordinance passed June 17th, 1889."

The list comprises the names of twelve doctors, each followed by the names of his "drummers." One doctor has but one drummer; five have two; one has three; two have five; one has six; one ten, and one eleven! Just think of it—fifty-one men "touting" and "heeling" for the doctors of one small town!

The City Clerk of Hot Springs certifies the list is a true abstract of the office records, and a note appended explains that the "hotel and doctor drummers" are by ordinance required to take out a license and wear badges showing their vocation.

Causes of the Increase in Divorce.—

The Medical Bulletin, of Philadelphia, says there would be fewer divorces if there was wider spread knowledge of the sexual relation, of its natural requirements, and the dependency of the most satisfactory conditions of both body and mind upon it; "for it is the key-note to all that gives to family ties and social order their coveted charms." More especially should the subject be included in the education of young women who look forward to married life, and whose vocation as wife and mother will be to preserve and transmit to the future, the advances in civilization of the past and present. Certainly there has been much neglect in this respect, and an enlightened consideration of the subject is called for.

A Very Irregular Foreign Body in the Alimentary Tract Safely Voided Under the "Potato" Treatment.—

J. Solis Cohen reports in Phila. Medical News the following:

A patient was recently brought me some two hours after having swallowed an irregularly shaped dental clasp.

Exploration of the œsophagus showed that tube to be unobstructed. The patient was ordered to feed exclusively upon buttered mashed and roasted potatoes, and to examine his stools carefully for the foreign body. Within forty-eight hours he left the object at my office door. It had been voided thoroughly coated with potato, to free it from which several washings had been required.

Professor Koch Resigns.—

It is stated that Koch has resigned all his official positions. This, we are told, is not on account of the failure of "tuberculin," but because he is upon the point of accepting a new office, that of Director of the Institute of Infectious Diseases, which has been organized by the German Government. It is also stated that the Academic Senate will bestow an honorary office upon Professor Koch, and that this will permit him to lecture whenever and wherever he pleases.

The Mississippi Valley Medical Association.—

This Society will hold its seventeenth annual session at the Pickwick Theatre, St. Louis, October 14th, 15th, 16th. A full programme of interesting papers has been prepared.

The same qualifications for membership are requisite in this Association as for the American Medical Association, the former being subordinate to the latter.

Tri-State Medical Association.—

The third annual meeting of the Tri-State Medical Association will convene in Turner Hall, Chattanooga, Tenn., Tuesday, October 27th, 1891, and continue in session three days. All who desire to read papers should send title to the Secretary, W. L. Gahagan, Chattanooga, Tenn. (P. O. Box 542), before September 1st.

A Law for the Prevention of Syphilis.—

The Massachusetts Legislature has enacted a law which provides that all inmates of charitable or penal institutions who are found to be suffering from syphilis, shall be isolated and treated, and if necessary detained in the institution until the infectious stage of their disorder is passed.

Frank Hamilton Potter, M.D.—

The death of Dr. Frank Hamilton Potter, M.D., one of the staff of editors of the Buffalo Medical and Surgical Journal, and only son of Dr. William Warren Potter, of Buffalo, is announced by the Medical Press.

Therapeutic Brevities.

Washing Out the Large Bowel in Dysentery.—Dr. Peter S. Korytin, of Novotcherkask, describes (*Vratch*, No 42, 1890, p. 951) 15 successive cases, of diphtheritic (9 cases) and catarrhal (6) dysentery, which he treated daily with warm (30° Reaum.) large enemata of 6 pints either of filtered water from the tap, or a carbolic acid solution (from 10 to 20 grains to 6 pints of distilled water). Only one of the patients died, the remaining fourteen making excellent recoveries. The total number of the injections in individual cases varied from one to six, averaging two and a half. The injected fluid was retained by the patient mostly from five to ten minutes, being sometimes expelled in one or two, and in other cases in from 15 to 20, minutes. The following effects were commonly observed: Abdominal distension and pain speedily subsided, the frequency of stools diminished and tenesmus decreased, the spirits, appetite, and sleep, quickly improved, the stools soon became painless, more solid, and free from offensive odor, mucous, blood and sloughs or shreds, while the temperature became normal. No therapeutical difference whatever was noticed between carbolic and simple enemata. It appears, therefore, that the beneficial results of the treatment should be attributed simply to the thorough washing out of the large intestine.

The Treatment of Fissured Nipple.—Dr. Barton Hirst, in the University Medical Magazine, advises the use of an application of equal weights of castor oil and sub-nitrate of bismuth in the treatment of fissure of the nipple. The nipple and adjacent parts should be thoroughly washed and disinfected before applying the ointment. One of the advantages of this application is, that it need not be removed if it becomes expedient for the child to nurse at that breast. The ointment makes a smooth and flexible coating, which not only serves as an efficient protective, bnt tends to reduce the pain and reflex irritation. For the mammary engorgement and pain that so frequently occur when the nipple becomes fissured, he advises the employment of lead water with laudanum, in addition to the ordinary sling-compress. The entire breast should be covered with a cloth wet with the lotion, and the applications should be repeated at short intervals. This line of treatment ordinarily prevents the formation of abscess. It is best to allow the unaffected breast alone to be nursed, and

the milk from the affected side drawn off with the breast pump. If it is imperative that the infant shall nurse at the fissured nipple, a glass shield with a rubber tip may be used.

Sputum as a Diagnostic Sign.—In phthisis we have nummular sputum; looks like coin; which floats in a clear liquid.

In measles we have nummular sputum, which floats in an opaque direction.

In bronchiectasis there is stinking sputum; also in fibroid phthisis we have stinking sputum.

In cancer of the lung, we have sputum that looks like currant jelly.

In pneumonia, we have rusty-colored sputum.

In œdema of the lung, the expectoration is serous.

Where we have pneumonia terminating in gangrene of the lungs, the sputum is exceedingly fœtid, and greenish or brownish.

The sputum of chronic bronchitis, when associated with disease of the heart, looks like the white of egg mixed with water, and may amount to a quart or half gallon in twenty-four hours.

The sputum of chronic bronchitis, when not complicated, is large, broad, irregular, and greenish or yellowish.—Morris in *Times and Register.*

Sciatica.—Correct the defective secretion of the liver, and your sciatica, neuralgia and malaria is removed and health restored. This is no whim of my own, but has been demonstrated in practice for over twenty years.

Mercury in any form will aggravate this condition, and should not be given—even if the stools are of a gray color—if you desire a permanent and speedy cure.

Some variation of the following formula I find of great value, and if the stools are dark or green, a cure will soon follow its careful use:

℞ Fl. ext. euonymus, chelidonium, chionanthus, } Parke, Davis & Co.
" berberis vulg, aa. ℥ iij.
" podophyllum, ℥ ijss—dr. iij
" nux vomica, ℥ j.
Glycerin, q.s. ℥ vj.

M. Sig.—Teaspoonful in water one-half hour before meals, and on retiring.
—Dr. Hale in *Med. Summary.*

Le Dentu on the Treatment of Cancers by Pyoktanin Injections.—Three cases of epithelioma of the eyelid, one of cancer of the tongue, and one of primary cancer of glands of the neck, were treated with pyoktanin. All were failures. The writer was obliged to extirpate the growths, and a microscopic examination showed not the slightest change in the epithelial elements.—*La Tribune Méd.*, May 7th, 1891.

Quénu found that similar injections softened the centre of tumors without in the least affecting the periphery.—*La Tribune Méd.*, May 21st, 1891.

Du Pre employed the drug in three cases of facial epithelioma, and in two cases of inoperable uterine cancer, with no beneficial effect save a lessening of the disagreeable odor.—*Jour. de Méd. de Chir.*

Spermin in Tabes Dorsalis.—At a meeting of the Biological Society, at Paris on May 24th, a man was presented by Depoux, who was stated to have been cured of a typical tabes dorsalis by injections of testicular liquid, after the manner of Brown-Séquard.

The patient is 30 years old, and was received at the hospital suffering from severe motoric ataxia and pronounced tabes dorsalis. After treatment, during four and one-half months, his condition permitted his discharge, and a resumption of his avocation as fencing master.—*Pharm. Post*, No. 28, p. 512, 1891.

Gaillard on the Toxicity of Pyoktanin.—In small doses, 1⅔ grains to 3⅓ grains, by the mouth, methyl-blue may cause *malaise*, nausea, certain painful sensations, and a transient albuminuria. In large doses, six to ten grains, for one unaccustomed to it, it may produce vomiting, diarrhœa, vesical tenesmus, and albuminuria.

In functional nervous diseases it produces a disturbance which may dispel or shift pain, but it does not compare in activity with analgesin.—*L'Union Méd.*

Salol in Summer Diarrhœa.—Dr. Weber reports excellent results in summer diarrhœa by using salol. He says, that after using calomel, bismuth, and nitrate of silver, without success, he gave 0.2–0.25 gramme salol with one drop of tinct. opium, in powders twice daily, and generally after one or two powders the discharges decreased in frequency, lost their bad smell, and regained normal color. After a few more powders even the most obstinate cases were fully recovered.—*Correspondenzblatt Schweizer Aerzte.*

Medical Progress.

The Influence of Alcohol on the Organism of the Child.—Premature employment of alcohol may generally be observed in two forms. It is at times associated with extreme poverty and the unbridled indulgence of an unfortunate class of the population; again, we see alcohol in the form of wine and beer daily offered to children at the tables of the well-to-do and the wealthy. In the child, acute transient alcohol intoxication, which we term "drunkennesss," is represented by two groups of symptoms, which are sharply distinguished as a rule. The first—the stage of excitation—is characterized by great sensibility to external irritation, and pronounced muscular restiveness. Not seldom this rises into an outburst of clonic and tetanic muscular convulsions. This stage is followed by extreme depression and paralysis—like relaxation of the nervous functions. In the cases of juvenile drunkenness observed by Demme (7 cases were encountered in the Berlin Children's Hospital during 28 years), these children lay from 12 to 18 and, in one instance, 36 hours, in a heavy, coma-like sleep, from which they could be only transiently aroused by pouring upon them cold water.

The child's tolerance of alcohol varies as with adults; many children are intoxicated by very small doses, while others bear large doses very well.

Amongst the disturbances resulting from the chronic use of small quantities of alcohol, dyspepsia stands first. Super-acidulation of the gastric juice is produced (more abundant formation of organic acid, rarely excess of hydrochloric acid). The albuminoids are readily and rapidly digested by such children, —the amylaceæ, on the other hand, slowly or not at all. These chronic disturbances of digestion lead finally to incurable decay of all the powers. More rarely cirrhosis of the liver is produced, even in children, as has been described by Birch-Hirschfeld, by Demme, and others, in a number of instances. Children accustomed to premature alcohol excesses, have been proved to undergo retardation of growth (especially of the long bones), while after discontinuing the habit a considerable increase in stature became manifest. The most deleterious influence of alcohol, however, is upon the central nervous system of young children. In children who, in respect to the nervous system, were free from hereditary disease, epilepsy and chorea were observed after the prolonged use of alcoholic beverages—affections which were cured in the hospital after suppression of the supplies, in a comparatively short time. The greatest evil to the child is, above all, the paralyzing influence of alcoholic excess on the character and moral vigor of the man, as physicians and jurists have had abundant opportunity to observe. But Demme would also charge to the account of alcoholic abuse, the increasing neurasthenic disposition of the young.

Demme, considering the baneful results of chronic alcoholism in parents on their posterity, arrives at the conclusion that drunkenness is hereditary; that, moreover, psychic disease and manifold disturbance of development occur in the families of drinkers in frightful proportion, complete depravation of such families finally ensuing. To be sure, such degenerated families are not frequently encountered.

With respect to the therapeutic value of alcohol, he by no means undervalues its often life-saving power in the exhausting diseases and collapse-conditions of children, without, of course, endorsing the extravagant theories of Brown and his disciples. Likewise, in complete prostration of the nutritive functions, alcohol is to be regarded as a conservator, and hence as a nutrient; but this employment of alcohol should always rest upon the direction of a physician. Alcoholic beverages as articles of luxury, should be kept away from children.—Ferd. Enke.

On Hot Infusions of Digitalis in the Treatment of Pneumonia.—During the past three months excellent opportunity has been afforded me to test the value of the treatment of pneumonia by means of large and frequently repeated doses of the infusion of digitalis, given early in the attack. The marked benefits resulting in a few cases thus treated last fall, suggested its great importance and bolder use. In twenty cases the treatment was commenced by the administration of ten grains of the mild chloride of mercury, together with a tablespoonful of the infusion of digitalis, given every hour as hot as the patient could drink it. In from six to ten hours profuse perspiration occurred in every case, followed in twelve cases by a normal temperature. In three instances the temperature, without the use of any antipyretic, dropped to 100°, in four to between 101° and 101.5°, and in one to between 103° and 105.5°. In no case was the temperature below 103° when first seen, and in all but one, it was ushered in by a direct rigor. In all the cases the characteristic rusty sputum was present, but its short duration showed

clearly that the inflammatory process had been cut short.

The severest case was that of G. J., a laborer, aged thirty-two, in whom there was violent delirium from the outset. The patient having felt ill for nearly twenty-four hours, had a violent chill at 4:30 P. M., February 25th. At 6 P. M. the thermometer showed a temperature of 105.5°; the pulse was 130. His attendants had him strapped to the bed. Crepitant râles were heard at the base and over the middle lobe of the right lung, anteriorly and posteriorly. The patient was given ten grains of calomel, followed in one hour and a half by a tablespoonful of a hot infusion of digitalis, the latter being repeated every hour, despite the fact the temperature at 11 P. M. had fallen to 103°, at 5 A. M. to 101°, and the pulse to 115, with a general improvement of all the manifestations of delirium. At 6 A.M. there was profound expectoration of rusty-colored sputum, that continued for twenty-four hours. On the third day the temperature returned to 105°; after active purging it fell rapidly. On the morning of the fourth day the pulse had dropped to 50, the temperature to 96°. The infusion of digitalis was discontinued and a combination of camphor, strychnine, and quinine given. Convalescence was rapid, and just ten days after the beginning of the attack the patient was up and about. The loss of weight in this short attack was remarkable. At the beginning of the attack the man weighed about 168 pounds; on March 7th he weighed 144½—a loss of 23½ pounds.

That hot infusion of digitalis acts quickly upon the cardiac muscle that forces the blood through the affected area, and thus to a marked degree overcomes the dyscrasia, is probably the *rationale* of the action of the drug. The use of a large dose of calomel, by reducing the consistency of the blood, takes the place of the old-time method of bleeding.

In the twenty cases treated, no ill results followed these large doses of digitalis. However, it would be advisable to watch the circulation; in case of a sudden lowering of the pulse-rate, the infusion should at once be stopped, for this is an indication that the desired effect of the remedy has been obtained; should slow pulse and low temperature persist, nothing will stimulate better than camphor, quinine, and strychnine, in quantities suitable to the case. Alcohol was not used until the temperature had subsided. In none of the cases was the so-called standard remedy, carbonate of ammonia, used.—Dr. E. P. Hershey, in *Med. News*, July 18th, 1891.

THE CAUSE AND CURE OF BALDNESS.—Baldness, like obesity, is one of those minor evils which could probably be much more thoroughly kept under control, if people would take more pains and begin earlier with their treatment.

Dr. M. Jos. Tyson, who writes upon idiopathic and premature baldness in the Lancet (London), makes some observations which quite corroborate this view. Thus he sums up the causes of baldness as: Insufficient exposure of the hair to the sun and air; close, ill-ventilated hats; excessive mental work and worry; the influence of heredity; venereal and alcoholic excesses; constant washing, and; the neglect of using some oil or pomade. These causes vary in importance in different cases.

Children, he says, should as much as possible do without caps, and hats when worn should be of the lightest description. During the hot season, a stouter hat is necessary for the prevention of sunstroke. A head covering should never be worn indoors, in trains, or in closed carriages. The kind of material employed, is of importance. In summer and still weather, straw appears to be the best, on account of its lightness and permeability. In winter, hats made of light felt, well ventilated and unlined, are to be recommended. The ordinary tall hat, and the thick, heavy, unventilated top hat, cannot be too strongly condemned. Of course, nothing special can be said regarding hereditary or nervous influences. In concluding, however, he mentions a few minor points of treatment which should not be forgotten:

Too constant washing of the hair is unnecessary, as well as harmful; once a week is quite often enough for cleanliness, as well as for maintaining the strength of the hair. The same remark applies to constant brushing, for continual brushing, especially with hard brushes, should be avoided.

There is a common notion that greasing the hair is vulgar; so many persons fall into the other extreme, and never apply any pomade at all. After the hair has been washed, it is certainly beneficial to apply some form of simple grease or oil.

When the head-hair is becoming rapidly thinned, some stimulating material, such as ammonia and cantharides, added to the oil, will increase its good effects.

Dr. Tyson does not take into account one possibly important factor in causing baldness, viz., that of contagion. It has been held on good authority that many cases of baldness are parasitic, and due to micro-organisms gathered from unclean brushes and combs.—*Medical Record.*

Lavage of the Human Organism; the Value and Methods of Administering Water in Disease.—Dr. Sahli recognizes the value of augmenting diuresis in order to eliminate the poisons which produce a series of infectious maladies, such as uræmia, diabetic coma, tetanus, etc. There is no diuretic which in activity approaches water; it is even probable that the so-called renal diuretics—acetate of potash, etc.—act as diuretics only when water is administered with them, or when the organism has a reserve of water which it can eliminate with them. If it be the strength of an enfeebled heart, which should and can be elevated in order to produce augmentation of diuresis, digitalis will yield the desired effect. But, with a heart of normal power, and when the kidneys fulfil their functions, diuresis may be augmented almost at pleasure by the use of abundant water.

In hydropsia, water may not be employed as a diuretic, and it is a bad practice to give to dropsical patients so-called diuretic ptisans, which act specially through the water which they contain. The greater part of the ingested water serves to increase the dropsy.

However, with many patients it is difficult to augment diuresis by administering water *per os*, on account of the difficulties connected with the administration itself, which is prevented by vomiting, diarrhœa, loss of consciousness, etc. When it is impossible to resort to the œsophagal sound or to lavements, success will follow subcutaneous introduction. As to whether diuresis obtained by administration of water really produces lavage of the organism is a question. Sahli believes that it does, for theoretical reasons, and on the ground of experiments made by Oppenheim and Z. Meyer, on increasing the elimination of urea. Sahli first employed in his subcutaneous method, Southey's fine trocars, by means of which he introduced in four places at once, a gentle current of sterilized salt-water (73 per cent.), pure water being rejected. He succeeded in obtaining a vigorous diuretic action. Thus, he administered to a patient, suffering from chronic mercurial intoxication, 4 to 5 litres of salt solution in several doses, and thus obtained 4,000 to 5,300 c. c. urine. Later he abandoned this method, and infused by means of a large hollow needle, in a short time, (that is, in 10 to 15 minutes), a litre of liquid, repeating this injection several times, when necessary.

In conclusion, Sahli insists on the utility of the subcutaneous injection of water in the diarrhœa of infants, in cholera nostras, in all cases of perforation of the stomach or intestine, in peritonitis, etc.—affections in which many patients die of thirst, because the natural channels can no longer receive water.—*Corresp. f. Schweizer Aerzte.*

An Easy Method of Plugging for Epistaxis.—Dr. A. A. Philip describes a ready method of plugging the posterior nares, which in his hands is both effectual and easily accomplished.* A piece of old, soft, thin cotton, oiled silk, or silk, about six inches square—a piece of an old handkerchief will answer—is taken, and by means of a probe, metal thermometer-case, or pen-holder, pushed, "umbrella" fashion, into the nostril, the direction of pressure, when the patient is sitting erect, being backwards and slightly downwards. It is pushed on until it is felt that the point of the "umbrella" is well into the cavity of the naso-pharynx.

The thermometer-case is now pushed on in an upward direction and then towards the sides, so as to push more of the "umbrella" into the pharynx, and then withdrawn. The closed end of the sac protrudes well into the pharynx, and its open end protrudes at the anterior nares. The inside of the sac may be brushed with some astringent, such as alum or turpentine.

A considerable quantity of cotton wool is pushed well back to the bottom of the sac in the pharynx. Then—the thermometer-case being held well against the packed wool—the mouth of the sac is pulled upon, and thus its bottom is drawn forward and forms a firm hard plug, wedged into the posterior nares. The sac may now be packed full of cotton wool—dry, or soaked in some astringent solution. The mouth of the sac is tied just outside the nostril, trimmed with scissors, and the ends of the thread secured outside.

In removing the plug, open the mouth of the sac, and, with small dressing-forceps, gently remove the cotton wool bit by bit. If there is bleeding, simply syringe the sac with weak carbolic lotion, or Condy's fluid, and repack with clean cotton wool. If there is no bleeding when the wool is picked out, gently pull out the sac, or if it adhere to the mucous membrane of the nostril, apply a little warm water, when it may easily be removed.

By this method no damage is done to the floor of the nose or back of soft palate by strings, etc., no disagreeable hawking, coughing, or vomiting takes place during introduction, and no disagreeable strings are left hanging inside the mouth.—*Boston Med. and Surg. Jour.*

* British Medical Journal, July 18th.

Opium Smoking in Phthisis.—Dr. John Gordon Dill, in the Lancet of July 11th, makes the statement that opium smoking, when done in a certain way, affords great relief to phthisical patients. "My custom," says he, "has been to soak tobacco in Battley's liquor opii sedativus, choosing this preparation because it contains all the component parts of opium in a fluid form, and to use it when it has dried. I have given this mixture in various proportions, and think a useful strength is three fluid drachms of the Battley to one ounce of tobacco; but of course it can be made much stronger than this. I usually advise the patient not to smoke just before eating, and I never in any case tell him how the tobacco is medicated. The most marked therapeutic effects of smoking opium in this way are, that it eases the cough, acts as expectorant, and 'cuts the phlegm,' as the patient often expresses it. One poor man assured me he had not the strength to get up in the morning until he had smoked part of a pipe to relieve his chest. The material which I have collected is not yet sufficiently large to draw any conclusion as to whether opium administered in this form has any specific effect upon the disease, although almost without exception the phthisical patients to whom I have given it have thought they derived great benefit from its use; nor has sufficient time elapsed, as I have only employed it for two years, to make sure that the improvement which has taken place in any case is permanent. In this connection two sources of error in considering the effects of any treatment upon the course of pulmonary tuberculosis have, I think, been quite left out of sight in the numerous statistics which have recently been published. The first is the fact that tuberculosis is an undoubtedly curable disease in certain cases, and it is quite possible to conceive that a coincidence of the cure and of the particular treatment adopted may explain many excellent results."

Dr. Dill adds suitable words of caution in regard to the dangers which the practice recommended involves, but is inclined to think these dangers have been exaggerated.

We are not told whether or not his patients inhale the smoke, but infer they do not. The point is a very important one in the *technique*. —*Medical Record*, August 1st, 1891.

Treatment of Heat Stroke (Thermic Fever) in Infants.—The system has accommodated itself to the changed condition. In case I. and II., in which the temperature was very high and at a dangerous point, and in which as large and as rapid an abstraction of heat as possible was indicated, I applied the wet pack to the whole body. In case III., however, in which the temperature was but 103° and no immediate danger threatened, I used only the limited pack, *i. e.*, a heavy towel folded three or four times, wrung out of ice water and applied to a limited portion of the body—in this instance to the head. I believed that the chief source of trouble lay in the great heat reflected from the ceiling upon the head of the infant, and hence it appeared to me that the therapeutic indications, viz., an obviation of the cause and an abstraction of the heat already absorbed, would be accomplished by the limited wet pack upon the head. The result was all that could be desired. In the general wet pack I used only ordinary hydrant water; in the limited wet pack I resorted to ice-water, thereby greatly enhancing the refrigerant influence.

The method is easy of application. All who have had any experience with children know the difficulties attendant upon putting a sick child into a bath; and more especially a cold bath—the stratagems that must be resorted to, the struggles of the child in the bath, its cries, certainly are not beneficial. In the wet pack, the child is so comfortable, that it is only when the pack becomes warm that it cries and shows uneasiness. I believe the wet pack is a more powerful agent for the abstraction of heat than the cold bath. It is true the cold bath produces a marked and rapid lowering of the temperature, but this effect is not permanent, and after a longer or shorter period of time the temperature has again risen, frequently to its previous height. The cold bath must then be repeated. The question that has presented itself to me is, whether the shocks to the system consequent upon the use of the cold baths, may not have some deleterious action upon the organism. The wet pack does not produce so rapid a depression of the temperature, but on the other hand, if applied as here detailed, it is not followed by a secondary elevation; the heat is abstracted gradually but continuously, and, in the time required for this gradual abstraction, the system has accommodated itself to the changed condition.—H. Illoway, M.D., in the *Medical News*.

Surgical Treatment of Tuberculosis by Chloride of Zinc.—Experiments, says Lannelongue, have shown that chloride of zinc produces a remarkable fibroid change in the normal tissues of animals, and, as might be expected, the same fibroid transformation is

brought about by the same agent in morbid tissues in general, including the tubercular. This chemical compound may be said to fix the anatomical elements by killing them, for it obliterates the capillaries and smaller vessels around where it has been deposited. An inflammatory action is thus set up in the vascular walls, which narrows the calibre of of the surrounding vessels for a considerable distance from the initial point. But over and above this another local change of the highest import is brought about. Very rapidly—even within a few hours—there is produced in the altered tissues, by transmigration, and probably also by cell proliferation, an enormous afflux of new anatomical elements. These young cells cause fresh œdema of the periphery of the granulation growths, and infiltrate the tubercular neoplasm to the fullest extent. From this moment, the struggle sets in between the accumulated elements and the bacilli, especially between the migratory cells and the microbes, to the detriment of the latter. However it may be as to the strife between cell and bacillus, the elements of the morbid growth which the chloride of zinc had destroyed are reabsorbed slowly, and finally disappear. The young cells, on the contrary, organize with great activity, and form a firm fibrous tissue, which is met in appreciable quantity as early as the day next after the injection.

Following the sclerosis in articular fungosities, there is produced a thickening and subsequent condensation of osseous tissue, if the periosteum be involved in the reparative process, as was the case in the examples of osteo-arthritic disease cited by the author. The remote results, so far as it is yet possible to judge, show a marked tendency for the sclerosed elements to be replaced by a more pliable connective tissue. As a consequence, the diseased parts regain their suppleness and their form, while locomotor functions are preserved entirely, or at least to the limits present at the beginning of the treatment.

Dr. Lannelongue has been at work for two months on human subjects, and has treated 22 cases, two being of pulmonary phthisis. Of these, 6 are cured, 2 almost cured, 9 doing well, the remainder not reported upon.

Our exchanges do not yet furnish details of the *technique* of the method, which does not seem to us a particularly novel or rational one.—*Lancet* (London.)

Treatment of Anæmia.—There are few chronic maladies in which deficient or faulty hæmatosis does not play an important rôle.

Indeed, many diseases would more readily yield to therapeutic measures if it were in our power to control this important and complicated function.

History repeats itself at the present time in the prominence which depletion has acquired in the treatment of anæmia and chlorosis.

The recent experiments of Dogiel on dogs would confirm the practical deductions of Scholz. Dogiel found that moderate bleeding (by 10 to 15 leeches) does not alter arterial tension, or even raises it slightly; that if these are repeated every three or four weeks, the patient gains weight, sometimes even considerably, and the number of red corpuscles increases, unless the bleeding is carried to excess or repeated too many times. Moreover these experiments were verified by Vogt and Schtcherbakoff, who added that the hæmoglobin is also increased.

These results are probably due to the increased tissue metamorphosis which becomes necessary for the renewal of life, as T. King Chambers aptly puts it.

Indeed, it would seem probable that in many chronic diseases a decided impression upon the circulation, innervation and hæmatosis, must prove a valuable therapeutic measure if excess is guarded against in a conservative manner.

When the empirical results are so clearly verified by physiological experiment, as appears to be the case in the matter of small bleedings for anæmia, the practitioner may safely resort to this measure, and noting the result carefully proceed with it.—*Dietetic Gazette*, August, 1891.

On Simple Melancholia and Its Treatment.—Every case is a separate study, and the treatment should be adjusted to the peculiarities found in each.

In all cases, suicide should be guarded against. Change of environment, with a suitable companion, is almost always advisable. Walking, gymnastics, massage, baths, friction, and a cessation of all mental activity, are imperative; also amusements as soon as they can be appreciated.

Assimilation should be encouraged every possible way. Food cannot be too nutritious or bountiful. The digestive fluids must be stimulated. Sleep must be encouraged and never curtailed. Hypnotics should be used sparingly and as a last resort.

Of the many in use, perhaps paraldehyd is the least depressing and injurious, though difficult to administer, and most unpleasant. The bromides and cannabis Indica

are useful in the more active forms. In the very excited cases a combination of the alkaloids of hyoscyamus with morphine, given by preference hypodermatically, I have found invaluable in controlling the motor irritability, and in conducing to natural sleep. Chloral and sulphonal are usually too depressing in their after-effects to be of advantage. Strychnine, arsenic, and phosphorus, are of use as the system can take care of them; iron is often useful in anæmic states. The bowels should be kept freely open, and stomachic tonics used judiciously. Remember that the brain is in direct communication with every portion of the animal economy, and that for its healthy action the condition of no other organ can be safely neglected.—A. B. Richardson, M.D., in *Med. News.*

A New Treatment for Alopecia.—M. Moty suggests a new plan of treatment for alopecia areata. At a recent meeting of the French Society of Dermatologie et Syphilographie, he presented a number of patients who had been subjected to intradermic injections of corrosive sublimate in strength of two to five hundred, and claimed the treatment had proved very satisfactory, in that the growth of hair over the bald spots had been more rapid than after other modes of treatment. A variety of vehicles had been experimented with, but it was found an aqueous solution was the best. Several injections of not more than five or six drops are made around each patch.

Modern investigation tends to show that there is at least one variety of alopecia, occurring in rounded plaques, which is due to the invasion of a micro-organism, and the observations of von Scholen, Thin, Robinson, and others, in this field, have rendered it scarcely justifiable for an author at the present day to attribute the affection to neurotic causes in all cases. If, as Robinson maintains, the organisms are situated deeply in the tissues of the scalp or other hairy portions of the skin, then the plan of treatment suggested is eminently rational, and ought to be successful.

It must always be remembered, however, that the disease is of a most erratic nature, and while at times it resists all efforts, at others it shows a tendency to rapid and spontaneous recovery.

Besnier relates an instance in point, where a patient was treated in his service continually for two years without success. He was then sent to a colleague who continued exactly the same treatment, and a cure was promptly effected.—*N. Y. Med. Record.*

A Suggestion for Hypodermatic Purgation.—At a meeting of the Louisville Medical Society, Dr. Flexner called attention to the sulphate of eseredin, from the laboratory of Boehringer in Germany. It appears that so far, its use has been restricted to animals, on whom it acts, when injected subcutaneously, as a purgative. Should this action be reproduced in the human subject, we shall probably find a valuable addition to our Pharmacopœia. The principle of active purgation, in any stage of peritonitis, as an effectual means of draining the peritoneum, is now very generally recognized. There are often difficulties, however, in the way of administering croton oil or other powerful cathartics by the mouth, especially where vomiting is already a pronounced symptom. As another speaker pointed out at the same meeting, that it is very desirable we should have something as a purgative to act in a manner corresponding with apomorphia as an emetic. Certainly a drug that would act rapidly in the manner indicated, without undue depression of the nervous system, would be invaluable in many conditions of the abdomen and pelvic organs. The suggestion is of very great interest, and of possible future value, and surgeons who make the abdomen the field of their operations may find it worthy of careful attention. The mastering of all bodily functions, physiological and anatomical, by the local selective action of remedies, is probably only a matter of time. —*Med. Press*, June 10th, 1891.

Peptotoxin.—Professor Brieger (Deut. Med. Woch., No. 26, June 25th, 1891, p. 821), points out that Salkowski has not referred to his original paper, and that he has been led astray by a printer's error, the amount of his peptotoxin introduced into the lymph sac of the frog being 1.5 gramme, and not 15. grammes. He also claims that the single positive experiment is of far more importance than seven negative experiments. In answer to Salkowski's statement that peptotoxin may be a product of artificial digestion, Brieger maintains that Salkowski's experiments were not sufficiently careful to allow him to exclude a bacterial origin. Brieger still considers that his peptotoxin is a proteid, not a basic substance as Salkowski holds, and that it is a product of the digestion of albuminoid bodies. He hopes that Salkowski will continue to study the subject, but warns him that to get satisfactory results he must pay greater attention to keeping everything with which he is working, free from external bacterial contamination.

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Original Articles.

ACUTE TONSILLITIS (AMYGDALITIS), ANGINA TONSILLARIS, QUINSY.*

BY SEATON NORMAN, M.D.

The faucial tonsils are two almond-shaped glands situated on either side of the isthmus of the fauces in the depressions between the anterior and posterior pillars of the soft palate. In health they should not protrude beyond the normal limits of the faucial pillars, and are visible only when undergoing some of the various pathological changes. The tonsil occupies a dangerous proximity at its outer side to the internal and external carotid arteries, being separated from these vessels only by the pharyngeal aponeurosis, and the superior constrictor of the pharynx. Somewhat posteriorly, and at the outer side, may be noted the descent of the pneumogastric, glosso-pharyngeal, spinal accessory, and hypoglossal nerves.

The tonsil receives its arterial supply from the ascending palatine and tonsillar (derived from the facial), the ascending pharyngeal (arising from the external carotid), the descending palatine, (a branch of the internal maxillary), and the dorsalis lingualis (from the lingual).

The nerves are derived from the sphenopalatine ganglion and the glosso-pharyngeal, the tonsillar branches of which form the "circularis tonsillaris" (around the organ).

When examined microscopically, the tonsil presents the characteristic features of a true lymphatic gland. It is an aggregation of lymphoid follicles and diffuse adenoid tissue, enveloped in a thin mucous membrane. The inner surface of the mucous membrane exhibits from twelve to eighteen orifices, indicating the points where the folds of membrane have penetrated in various lengths into the interior of the gland. These involutions of mucous membrane form the lacunæ or crypts of the tonsil, and around each recess may be seen numbers of lymph follicles. Mucous-secreting glands may also be detected outside of the layer of lymph follicles (Klein). The exposed surface of the gland is covered with layers of stratified epithelium, which in structure is identical with the protoplasmic nucleated cells distributed over the lymphatic masses occurring in the oral cavity, and throughout the alimentary canal; the deeper portion of the organ is imbedded in the tissues of the fauces, a peri-tonsillar membrane or capsule being formed from the contiguous connective tissue.

Familiar with the minute anatomy of the tonsils, we are naturally and irresistibly driven to the conclusion that their functions must be similar, if not identical, with those of the lymphatic glands. The recent investigations of Hill have demonstrated they are actively engaged in the manufacture of leucocytes, and these corpuscles, passing by diapedesis from the lymph follicles into the lacunæ, perform the remarkable office of phagocytes, or scavengers, in the mouth and pharynx. During mastication they assist in the elaboration of mucous for the lubrication of the bolus of food, and it is claimed by Hingston Fox that any excess of saliva is absorbed by the crypts of the spongy tonsil. That they maintain the slightest connection, except through the medium of the sympathetic system, with the sexual apparatus, I consider extremely doubtful, and the earnest discussions of some members of the profession as to this relation can be relegated only to the province of simple speculation and casual conjecture.

Acute tonsillitis is an acute inflammatory invasion of one or both tonsils, attended with pyrexia and hyper-pyrexia, and with coincident inflammation of oro-pharynx, uvula, velum palati, and pillars of the fauces.

In the description which follows I shall attempt to delineate the salient features of a

*Read before the Vanderburgh County Medical Society at Evansville, Ind., May, 1891.

simple acute tonsillar disturbance, as all of the acute affections of these glands differ in their intensity and extent of manifestation, rather than in variety of type.

The term *quinsy*, which has been employed for years to denote especially the suppurative stage of the disease should, I think, be excluded from the nosology, and the word *follicular*, as indicating the morbid process in the lymph follicles alone, be substituted. When it is desired to express more precisely the exact anatomical situation of the disease, the words *lacunar* and *parenchymatous* are desirable.

It is now almost universally accepted that tonsillitis occurs most frequently and persistently in individuals possessing the arthritic diathesis. The subject of recurrent invasions of tonsillitis may never have suffered an attack of acute rheumatism, but a careful investigation of the history of each case will furnish ample evidence of a hereditary tendency, either in the individual himself or in members of his family.

Although no age is exempt, the attacks occur with greater frequency and severity between the years of fifteen and thirty. After the fourth decennium the disease is exceedingly rare, though peculiarly aggravated cases have been recorded in patients beyond the age of seventy years. Climate exerts a decided influence, the liability to attacks being more pronounced in the temperate than in the tropical zones. Scrofula, what we now understand as the tubercular diathesis, was formerly considered as a special predisposing factor in the ætiology of the affection, and we may class as favorable tendencies any of the various causes which lead to deterioration of the general health and to reduction of the tone and vigor of the system.

In text books I have seen no allusion to the obstructive lesions of the nasal passages as exerting a causative influence in the precipitation of the disease, but from my own clinical experience, I am convinced the nasal organs play an important role in the predisposition to tonsillitis. While the tonsils are anatomically connected more intimately with the lymphatic and digestive systems than with the respiratory, their situation in the respiratory channel would naturally subject them to the pathological changes which are accustomed to result from partial or complete nasal stenosis.

Among the direct causes may be mentioned the sudden reduction of the normal temperature, whether this results from exposure to a draught while perspiring, or a neglect of proper clothing. Lately I have treated a case of acute tonsillitis due to the inspiration of cold air through the mouth instead of through the nose. In a young girl, recently, an aggravated attack of tonsillar inflammation preceded and accompanied the catamenial flow. It is not at all uncommon to see amenorrhœa lead, in the same patient, at one time to rheumatism, and at another to tonsillitis (Brone).

While the field of bacteriology continues thronged with investigators anxious to discover some new micro-organism, it is not surprising that a microbic origin has been assigned as a specific ætiological factor. The opinion, first adduced by Hingston Fox, that the disorders of the buccal secretions were active agents in the production of the disease, has been gradually obtaining converts. Few observers can deny the septic source of a large number of cases. The occurrence of simultaneous attacks in several members of the same family, leads us to infer that some extrinsic contagion is energetically at work. Oftentimes the infection may be traced directly to unsanitary environment, drinking of polluted water, use of impure milk, or inhalation of poisonous effluvia arising from decomposing sewage. We can readily understand how the presence in the mouth of decayed teeth, the suppuration of an alveolar process, or discharge of an abscess, may produce a septic inflammation in the tonsil or in a more remote gland of the lymphatic system, but I think it rare that acute tonsillitis is provoked by such contamination; there can be no doubt that such a condition of the oral cavity would be a constant menace to the integrity of the general system, and would in some cases lead to localized sepsis.

Both Hingston Fox and Garrod have strongly insisted on the microbic origin of tonsillitis as well as rheumatism, but the specific micro-organism actively engaged in the production of either disease has not been isolated.

The symptoms of a typical case of acute tonsillitis are markedly characteristic. There may be no warning of the approach of the attack, which is heralded usually by prominent febrile phenomena, the thermometer indicating a range of temperature between 101° and 103° F., and rate of the pulse correspondingly augmented. The tongue is heavily coated, bowels obstinately constipated, breath fœtid and disgusting, the patient complains frequently of nausea, and the mouth is covered with a thick, tenacious mucous. During the height of the fever thirst is constant and distressing, and the presence of odynphagia, dysphagia, and anorexia, contribute to the general discomfort and intolerable wretchedness of the individual.

The stage of pyrexia is succeeded by pallor, limited or extreme, of the cutaneous surfaces, attended in severe cases with abundant and acid diphoresis. The urine will be found of high color, low specific gravity, and diminished in quantity; especially in the subject of the arthritic diathesis will there be increased elimination of urea and urates, and in hyper-pyretic conditions albumen will be present.

Pharyngoscopy discloses the tonsils intensely red, greatly swollen, and by their near approximation almost closing the faucial orifice. The uvula, soft palate, pharynx, pillars of the fauces, all participate in the morbid process. In the more aggravated instances the patient will be unable to open the mouth sufficiently wide to afford a satisfactory inspection. This difficulty, which is almost pathognomonic, is often increased by inflammation of the lymphatic glands at the angle of the jaw.

The respiration is somewhat embarrassed, articulation painful, enunciation difficult, and cough occasionally harassing.

Pain is a constant and wearisome attendant, frequently invading both aural cavities and the temporo-maxillary articulation, and is a potent factor in the causation of the subsequent debility and general prostration.

In extreme cases, the function of deglutition is for a time entirely abolished, the food at each attempt being regurgitated into the naso-pharynx and nose.

Those authors who insist upon the doctrine of the unity of tonsillitis and rheumatism, recommend in all instances auscultation of the heart, and maintain that cardiac murmurs may be detected with amazing regularity in both the acute and sub-acute stages.

The diseases simulating most closely acute tonsillitis are, diphtheria, scarlatina, syphilis, cancer, and labio-glosso-pharyngeal or bulbar paralysis.

In diphtheria, the throat can be examined with greater facility; the pseudo-membrane will be found adhering to the surface of the tonsil, uvula, and oro-pharynx, and when mechanically removed discloses numerous raw and bleeding points. Examinaination of the urine demonstrates the presence of albumen during the first few days of the diphtheritic invasion, and its persistence throughout the attack; but in simple acute tonsillitis, albumen is detected only in hyperpyretic states, and on the second or third day of the disease.

The most characteristic point in the differentiation from scarlatina, is the glandular enlargement at the angle of the jaw. A rigor announcing the incipiency of the attack, a hot dry skin and excessive pyrexia, enlarged papillæ of the tongue, and appearance of the eruption on the second day, confirm the diagnosis of scarlatina.

In cases of domestic syphilis contracted in the act of osculation, and where the primary lesion is absent, the diagnosis is difficult. Specific infection of the tonsils usually begins during the secondary incubation of syphilis, and, at the same time, glandular swellings may be observed in the inguinal, post-cervical, and epi-trochlear regions. Often when no history is obtainable, the accidental discovery of a mucous patch, or the pigmented appearance of a cutaneous lesion, will lead to a correct conclusion.

The invasion of cancer is slow and insidious, and rarely apparent before the fifth decennium; it is usually unilateral and attended by the characteristic cachexia. There is marked fœtor of the breath, the glandular enlargement is confined to the side of the affected tonsil, pain is constant and distressing, and deglutition exceedingly difficult. A positive diagnosis can always be made with the assistance of the microscope. Cancer of the tonsil is a rare affection.

In glosso-labio-pharyngeal paralysis, the in-

ability to open the mouth, the thickness of speech, the difficulty of enunciation, and the increased secretion of saliva, might at first provoke an erroneous opinion, but a history of the case should at once dispel all doubts.

An acute tonsillitis usually terminates in resolution in from four to seven days. Where the inflammatory process progresses to suppuration, and where both tonsils are not simultaneously affected, but the morbid phenomena, having subsided in one, appear with renewed energy in the other, the duration of an attack may be prolonged to two or three weeks.

The prognosis, as a rule, is favorable, although cases are reported where the suppuration has led to rupture of the internal carotid artery and fatal hæmorrhage, and Cohen reports a case where suffocation resulted from the discharge of an abscess during sleep; but such accidents are fortunately rare.

As a routine practice, it is well to inaugurate the treatment with a brisk mercurial cathartic, and maintain a lax condition of the bowels throughout the acme of the more urgent symptoms. For an adult I prescribe salicylate of sodium in ten-grain doses, with a quarter of a grain sulphate of codeia in lemon syrup, every two hours. This procedure usually has the effect of rapidly reducing the inflammation, diminishing the severity of the pain, and rendering the patient comparatively comfortable. In the great majority of cases the salicylate will afford the happiest results, but if there is no material benefit to the patient, I discontinue after the first forty-eight hours. With some physicians the tincture of aconite is a favorite remedy, and may be employed in one-drop doses every hour until the temperature is diminished, or the rapidity of the pulse notably decreased.

Many observers report beneficial effects from the use of the salicylate of phenol, or salol, administered in capsules of five grains each, and repeated every two hours. The resin of guaiacum prescribed in the form of a lozenge containing two grains, every two hours, is also an efficient and popular agent.

After the subsidence of the acute symptoms, general systemic treatment, as indicated, should be instituted in subjects affected with anæmia or arthritic constitutions.

During the acute stage of the disease local measures, externally, are of genuine value. The application of heat in the form of napkins wrung out of water as hot as can be borne, are soothing to the patient, and decidedly beneficial. On the other hand, London specialists are enthusiastic advocates of dry cold applied by means of an apparatus especially constructed for the purpose, or by the medium of ice-bags. "I have found external applications of dry cold generally preferable to heat in most cases of inflammatory disease of the throat" (Lennox Browne).

When the pain is acute and harassing, great relief is afforded by spraying the nasal cavities with four-per-cent. solution of cocaine hydrochlorate. The atomization may be employed as frequently as necessary for the control of the pain.

When the odynphagia has somewhat disappeared, I prescribe a lozenge of ammon. chlor. co., to be slowly dissolved in the mouth, every two hours. When the patient can conveniently visit my office, I spray daily the nose and naso-pharynx with a half per cent. solution of menthol.

All nasal obstructions, whether due to deflections or hypertrophies, should in due time receive the appropriate treatment.

My experience with measures intended for the local medication of the throat, especially gargles, has been unsatisfactory. When, however, some suppurating process is active in the oral cavity, I recommend as a wash either peroxide of hydrogen, or a solution of boracic acid and menthol in distilled water, every two or three hours.

The practice of ordering gargles containing drugs inimical to the integrity of the teeth, cannot, I think, be too strongly condemned. A mixture, the chief constituent of which is a mineral acid, or the tincture of the chloride of iron, is obviously detrimental and unsuitable for local usage.

In regard to surgical interference in cases of tonsillar inflammation, I shall quote the instructions given in the third edition of Mr. Lennox Browne's admirable work on the "Diseases of the Nose and Throat."

1. Never inflict unnecessary pain by use-

less scarification on the surface of a tonsil undergoing inflammation.

2. Never make deep incisions, unless there is almost certainty of advanced suppuration. The instrument for making an incision should be a curved pointed bistoury, with not more than one inch of cutting edge, and the cut be made from without inwards, so as to avoid the not impossible risk of injuring the artery.

3. To recommend removal, on subsidence of the attack, of tonsils chronically enlarged and liable to quinsy.

4. To remove tonsils as soon as they become sufficiently large, in those cases of recurrent quinsy in which there is not chronic enlargement, but in which the tonsil, though diseased, is too small for excision except on occurrence of the acute inflammation. By this means the attack is at once cut short, and the chance of further recurrence avoided.

Evansville, Ind.

THE SURGICAL TREATMENT OF POST-TURBINATED HYPERTROPHY.

BY A. E. PRINCE, M. D.

That hypertrophied tissue, which is found at the posterior extremity of the inferior turbinated bone, may be removed with the snare, or destroyed by the Galvano- or chemical cautery, is attended with difficulties in a majority of cases, I am convinced both by personal experience and by the testimony of those who are not unskilled in the inspection and manipulation of these parts. Nothing sounds more simple than the operation as described by Bosworth:

The loop having been bent slightly to one side before entering the nares, will, by its own elasticity, slip over the mass, when it can easily be drawn into place and the tumefaction cut through. Of course, there is liable to be considerable hæmorrhage as the result of this procedure, but if the operation be done slowly, a half an hour or even an hour being consumed, it may often be done without loss of blood. If, however, hæmorrhage does occur, a plug of cotton can easily be passed back and wedged between the cut surfaces and the septum, and allowed to remain until the next day if necessary.

This operation, as just described, is the standard for removal of posterior turbinated hypertrophy, and although it is usually efficient in the hands of a patient surgeon, and has served the purpose in the past, there are nevertheless certain disadvantages, more or less real, which it may seem worth while to attempt to overcome.

The introduction of the wire, and its adjustment so as to get the entire tumor in the loop, is not always easy. While tightening the loop over the growth, more or less of it may escape, often resulting in the removal of small portions, and necessitating a repetition of the operation, which is thereby more difficult.

In many instances, the tumor consists more of dilated blood vessels than actual hypertrophy, and in these cases it is almost impossible to apply the snare on account of its escape with the closure of the loop, in which case the removal of but a small portion of the mucous membrane may be the result. This difficulty is increased by the use of cocaine. The tedious nature of the operation, when attempt is made to avoid hæmorrhage, exhausts the patience of both patient and physician.

With the greatest prudence, hæmorrhage will rarely be avoided, and when it occurs, the difficulties of ocular inspection are increased, which is essential to the formation of an opinion as to the result attained.

The attempts, as recommended, to arrest arterial hæmorrhage by "passing a plug of cotton back and wedging it between the cut surface and the septum," will seldom succeed, because this space is wider than the anterior passage; and besides, the hæmorrhage may not come from the lateral face, but from the posterior end of the bone. If venous or capillary, it will cease spontaneously (except in the purpuric state). Further than the inconvenience, I regard hæmorrhage of no moment, because it may be effectually controlled at any location by the use of a posterior plug, which can be introduced at a moment's warning with the aid of a soft catheter. With confidence in one's ability to execute this manœuvre, all danger vanishes.

The substitution which is here offered for the snare is, the curved turbinated forceps, which has served me in this class of cases for about two years.

In its construction the excellent septum of Wier has been taken as a model, and it has been made with sufficient length to reach

into the pharynx. To it has been given the curve of the convex surface of the inferior turbinated bone. The handles are curved, and the pivot so placed that it can be easily opened when introduced into position; the size is such it can be passed readily through the inferior meatus; the construction of the blades, moreover, permits the biting edges to come in exact contact, while the edges on the convexity of the blades are cut away to prevent the material in grasp from interfering with their perfect closure. The patient is placed in a recumbent position, and O'Dwyer's gag placed in position on the right side of the mouth; a canvas cone placed over the mouth and the patient instructed to breathe deeply and rapidly, with emphasis on the exhalation; two drachms of ethyl bromide are now poured on the cone, and the respiration continued in the same artificial, rapid, deep manner.

If successful in controlling the manner of breathing, the patient will be anæsthetized in 30 to 40 seconds, when the artificial forced respiration will be changed to natural slow breathing.

If from any cause this manner of breathing is not maintained, the ethyl anæsthesia is not certain to be profound, when chloroform or ether may be added. The next step is the introduction of the left index finger back of the palate, bringing it in contact with the posterior end of the inferior turbinated bone, where the tissue in question will be distinctly felt as a soft, yielding mass.

The forceps are then introduced with the concavity downward, and glide easily along the floor of the inferior meatus until felt by the finger. The cutting edge then rotates outward and the blades are separated. This movement will bring the tumor between the tips of the blades, the position of each of which can be precisely determined by the sense of touch; their curvature forces them close to the turbinated bone. The blades are now closed on the tumor, and the concavity rotated downward and inward through a semi-circle, while being withdrawn, the effect of which is partly to cut and partly to tear the mucous tissues and vessels, thus favoring the early arrest of the inevitable hæmorrhage. The operation is repeated on the opposite side without removing the finger from the mouth. The patient is then placed in a position favorable to the escape of blood, a portion of which is always swallowed. The hæmorrhage, though seemingly profuse at the time, does not continue more than a few minutes, and but little blood is actually lost. In but one case out of an approximate fifty have I found it necessary to introduce a plug to control the hæmorrhage.

My excuse for detailing this procedure so minutely, is found in the desire that some may be led to practice the bimanual manipulation, which will prove invaluable in the removal of pharyngeal, tonsil, nasal, and other forms of polypi as well.

The form of the blades of the instrument, aided by the sense of touch, often enables one to reach the origin of a pedunculated polypus, and in some cases a small portion of the bone has been removed with the pedicle, thus demonstrating the efficiency of the operation.

Jacksonville, Ill.

SIX CASES OF LITHOLAPAXY.

BY WM. MEACHER, M.D.

In the little I have to say on litholapaxy, I am offering nothing new—only a little more experience to add to the general fund.

CASE 1.—Mr. H., 67 years old, had been troubled with stone a year or two. There was a little prostatic enlargement, and a great quantity of purulent mucous discharged from the bladder with the urine.

The operation occupied about an hour and a half from the time the patient was anæsthetized. The stone weighed fully three-quarters of an ounce, and was composed of phosphate of lime. After coming out from the anæsthesia, patient had considerable pain, but it was soon relieved by an anodyne, and he passed the night fairly well. The next day, while on my way to visit, he was met on the street, and, of course, I sent him home, directing to stay there and keep quiet for several days at least. Although the patient did as directed, he insisted he was as able to go about as before the operation.

CASE 2.—Man, aged 25 years. Operation lasted over one and one-half hours. Stone, phosphate and triple-phosphate of lime. Patient had two moderately severe chills, one on the first, and one on the second, day succeeding the operation; temperature on the

second day 103½°, but was much lower on the third; from that time on he had no further trouble. Went home two weeks after the operation, and in one week more went to work on his farm.

Case 3.—Man, 70 years old. There was, in this case, considerable evidence of diseased condition of the neck of the bladder, which, during the next six months, proved to be malignant. This, however, did not prevent the introduction of the instruments, and removal of a small stone, weighing about one-fourth of an ounce—phosphate of lime. The operation was finished in about thirty minutes, and did not seem to trouble the patient much, nor do him much good.

Case 4.—Woman, age 32; an invalid; had not left her bed for three years. The stone was phosphate of lime, weight about one-third of an ounce. Had been troubling her some months. Twenty-four hours after, she felt very little inconvenience from the operation.

Case 5.—Man, aged 32. In this case the stone had for its nucleus a piece of rubber catheter. Sometime within the preceding year, this patient had some urinary trouble requiring the use of the catheter. A soft rubber instrument was used, and left in the bladder until the next day, when, upon attempting to remove it, the eye-end broke off and remained behind. The patient was told it might be necessary to make an incision into the bladder, that is, to do lithotomy, in consequence of the piece of catheter that was probably in the center of the stone; I determined, however, to see what could be done with the lithotrite.

Placing the patient under the influence of the anæsthetic, I introduced the instrument, and had no difficulty in crushing the stone. A number of times I felt the piece of catheter in the jaws of the instrument, but supposed I was only squeezing it. After having, as I believed, completed the crushing, I removed the lithotrite and introduced the evacuator, when to my gratification the pieces of catheter were seen dropping into the bottle of the evacuator along with the fragments of stone. The piece of catheter had been broken as readily, and in as small pieces, as the stone, so we were able to clean out the bladder at one sitting. The stone was phosphate and triple phosphate of lime, weighing over half an ounce. The patient made a good recovery.

Case 6.—Mrs. N., aged 63, had suffered bladder trouble for six years, but did not know what was the matter. The operation was completed in about 45 minutes. The stone, weighing fully an ounce, was of two different formations—the outside being phosphate of lime, while the nucleus seemed to be oxalate of lime. The next day, after the efiects of the anæsthetic had passed off, the patient declared she felt no ill effects from the operation. The bladder had become so diseased by the long continued irritation that it was some months in getting well, but improvement was steady from the time of the operation.

It so happened that there were two patients, both elderly men, with stone in the bladder, in the village of N., where I operated on the first case mentioned. I was called to both cases, but operated only on one. The one I did not operate on I saw first. After finding the stone, I set the day for the operation, one week from the day of examination. In the meantime the patient's sister, who lived in Chicago, learning of her brother's complaint, came and took him to Chicago, where, as she said, he could have the best of treatment. For some reason lithotomy was done instead of litholapaxy, and he died from the operation. Now this patient was no older than his neighbor, Mr. H., for whom I did litholapaxy, and in just as good a condition to bear an operation, in fact *better*, so far as I could judge, for he had no prostatic trouble, and I believe would have borne litholapaxy well. On the other hand, had Mr. H. undergone lithotomy, it would, I am satisfied, have proved fatal.

I mention the above for what it may be worth in the way of experience. As stone in the female bladder occurs so seldom, it seems quite remarkable that two of these cases should have been in females. I used the same instruments in operating on them that I did in the other cases.

While the operation is done with greater facility for women, I found in my two cases that I was more liable to catch the bladder in the lithotrite than in operating in the male bladder. This I thought might be explained by the fact, if it is true, that the muscular coat of the female bladder is not as strong as that of the male bladder. The shortness of the female urethra, it would seem, makes it easier for the bladder to empty itself, and Nature seems to have contemplated the female bladder being pushed about and jammed up by the gravid uterus, hence it is

more limp, and liable to be caught by the lithotrite.

In regard to lithotrites: I much prefer Thompson's. In Bigelow's the foot of the male blade fits into a depression in the foot of the female blade. In operating, this depression becomes impacted with stone, and the instrument must be taken out of the bladder very often to free it, or the blades cannot be closed, and so cause serious trouble in the removal of the instrument. But in Thompson's the foot of the male blade reaches entirely through the foot of the other blade, making impacting or clogging impossible.

I much prefer, too, the milled wheel, which works the screw pressure in Thompson's, to the handle that works it in Bigelow's; I think the milled wheel enables one to exercise finer touch, which is so essential in working the instrument. I know of no surgical operation in which the sense of touch needs to be educated to a higher degree than in litholapaxy; there must be, also, the greatest concentration of mind. Sir Henry Thompson says, in speaking of lithotomy, that for the time being, *i. e.*, during the operation, "you and your patient, to you, are to be the only persons in existence," and I would say in litholapaxy that "you should mentally go with the lithotrite down into that bladder, and stay there during the operation, superintending every movement of the instrument, until the work is done, following it out. While I regard Thompson's lithotrite as much superior to Bigelow's, I think it is acknowledged the American evacuators, Bigelow's and Otis', are superior to Thompson's or any of the English instruments.

Portage, Wis.

AMNIOTIC DROPSY, ASCITES, AND OVARIOTOMY—RECOVERY.*

F. B. FLORENTINE, M. D.

The unusual complications of the following case prompts a detailed report thereof.

On the 15th day of September, 1889, I was called in consultation with Dr. J. M. Wilson, to the bedside of Mrs. F. F. Found a young woman, 20 years old, of medium size, and rather sanguine temperament, in a half-sitting posture in bed, struggling from dyspnœa, due to an unusually large amount of dropsical effusion, as subsequently attested. Although not much emaciated, still she had a haggard, anxious look; her pulse was very small and rapid; there was complete anorexia, with much thirst. Was married October 20th, 1886. Six months later had a miscarriage, at four months' pregnancy, but made a nice recovery, and again soon became regular, enjoying good health, as before. On the 27th day of March, 1888, she gave birth to a well developed girl, and made a splendid and rapid recovery. The infant child died, however, four months after, from cholera infantum.

In September, 1880, her menses returned regularly, and from that time on she enjoyed the best of health, till the latter part of February, 1889, when she suddenly stopped menstruating, and felt for the first time slight pains in the lower part of the abdomen, especially on the right side, with no other especial symptoms except some nausea and vomiting; she was, however, somewhat constipated. She kept about the same till the fore part of June, when she suddenly became very ill, with high fever, preceded by repeated chills, acute pains and great tenderness in the lower part of the abdomen, anorexia with excessive thirst, and a very rapid pulse. Said spell lasted nearly two weeks, after which she returned to her former condition, with the exception that all at once she commenced to rapidly increase in size, till the abdominal walls seemed to be distended to their fullest extent.

We were also informed she had always enjoyed good health, as far back as remembered, till February, 1889, except as above mentioned. She menstruated for the first time between the ages of 12 and 13 years, without any trouble, and ever since has been very regular, without any menstrual difficulty whatever.

Her family history is also excellent. Her parents, although advanced in years, are still living and enjoying good health; a brother and sister also are very healthy. No consumption, cancer, syphilis, or scrofula ever existed in the family as far back as known.

The quantity of the urine voided was quite

*Read before the Michigan State Medical Society.

diminished, and its specific gravity increased, probably in consequence; no albumen.

Upon examination, we found the abdominal walls enormously distended, (especially at the hypochondrium), dense, symmetrical, almost uniformly dull on percussion; but palpation revealed a slight feeling of fluctuation at the upper portion. No umbilical prominence, and only slight infiltration of the genital parts noticeable.

Vaginal examination disclosed a rather soft, almost flattened and somewhat patulous os, apparently losing its shape, as it were, in the distended walls of the uterus, the latter being immovable. As she had ceased menstruating for about six months, was considerably annoyed from nausea and vomiting, (especially the first two months), with pricking sensations of the breast, etc., and besides, suffered more or less from regularly recurring intermittent pains, we naturally diagnosed the case as pregnancy with ascites, with threatened miscarriage, which diagnosis subsequently proved to be correct, but incomplete.

As her bowels had not moved for four or five days, we prescribed a hydragogue cathartic, with proper nourishment. During the following night, however, she suddenly suffered such exacerbation that Dr. Wilson, was promptly summoned. But as he was very ill, he requested me to take charge of the case.

Upon arrival I found her a great deal worse than the preceding day, in fact, suffocation seemed imminent; and she suffered excessively from pains similar to labor pains.

Vaginal examination revealed quite a dilatation of the neck of the womb, with protrusion of membranes. I immediately sent for assistance, but as such failed to materialize in time, I concluded to rupture the membranes and bring on a miscarriage. An almost spontaneous expulsion of fœtus, placenta, and membranes, took place, apparently gushing out with the waters. The quantity of amniotic fluid that escaped was extraordinary, as nearly one-half an ordinary pailful was saved. Shortly after the patient reacted very nicely. The abdominal, and especially the diaphragmatical, distension very perceptibly subsided—sufficiently to very much improve respiration, in fact, completely relieving her from almost threatened suffocation. She went into a profound sleep, and slept soundly for nearly six hours. When she waked, she willingly partook of nourishment, and felt very much improved in every way. But, after all, the abdominal distension, as yet, remained quite the same as before, except the extreme upper portion was somewhat relaxed. Palpation disclosed for the first time a marked fluctuation there, besides a very large, smooth, globular tumor, that seemed to fill up the whole cavity. The next day, by vaginal examination, I discovered the tumor was independent of the uterus, the latter being already quite movable. Four or five days after, finding she had notably and rapidly increased in size, her respiration again becoming quite difficult, I became satisfied rapid dropsical effusion was taking place independent of the tumor, in consequence, probably, of the pressure caused by the latter upon the blood vessels, thereby interrupting the circulation. I therefore immediately resorted to paracentesis, and relieved her of two ordinary pailsful of liquid, when the large tumor stood in bold relief, as it were, in the abdomen, and the heretofore incomplete diagnosis was, for the first time, made plain, namely: Amniotic dropsy, ascites, and ovarian tumor.

My patient, from that time on, rapidly improved in every way. She rested comfortably, ate well, and consequently rapidly improved in strength, and kept right on doing well till the day of the operation.

However, noticing that she had again considerably refilled with water, on October 10th, 1889, I tapped her again, and obtained another pailful of water. The last tapping did not seem to affect her favorable progress at all. After carefully preparing my patient, her rooms, and myself, for the operation, on October 16th, 1889 (only about one month after I first saw her), with the assistance of Drs. J. M. Wilson, O. M. Belfrey, J. L. McLaren, G. W. Lacea, and J. W. McMeekin, I successfully removed an ovarian cyst, weighing about 40 pounds. There was nothing unusual about the operation, except, perhaps, that a large portion of cystic fluid accidentally escaped into the abdominal cavity while the cyst was being emptied preparatory to its extraction, and also that I did not use any ligatures whatever. I took up the ovary,

with its plexus of veins, etc., with the tumor, by severing the ligament in such a manner as to render it almost incapacitated, as it were, for hæmorrhage. Instead of cutting the ligament at a right angle, as is ordinarily done, I dissected it across with the handle of the scalpel, splitting or tearing through it almost longitudinally. However, as there was no perceptible hæmorrhage, I decided not to put a ligature on the remaining free end of the ligament; and after carefully and aseptically cleansing the abdominal cavity, and becoming satisfied all points had ceased to bleed, I carefully closed the incision, inserted a drainage tube, and finished by a well applied dressing. She rallied from the shock somewhat slowly, but completely, in a few hours, with a great deal of pain.

The following clinical statement of the case was carefully made by the professional nurse:

At 8 P.M., after she had completely rallied from the effect of the operation, the pulse was 146, temperature 101.1°; gave morphine hypodermatically. At 9 P.M. she was very restless, and did not sleep; vomited every few minutes.

October 17th, pulse 180, temperature 100°; gave milk and water, also broken ice, but it was not retained; at 7 P.M. pulse 174, temperature 99°; slept 1½ hours during the night.

October 18th, pulse 176 at 7 A.M., temperature 99.2°; gave milk and lime water, one pint, and a wineglassful of champagne; vomited once during the night, and she slept four hours; also gave morphine.

October 19th, pulse 154 at 7 A.M., temperature 99°; gave an enema of milk, 4 oz., every three hours; pains in the abdomen during the afternoon; gave morphine; slept four hours during the night; also took 1½ pints milk and 3 wineglassesful of champagne during the last forty-eight hours; vomiting stopped.

October 20th, pulse 100, temperature 98.6°; no pains till the afternoon; gave morphine, when she rested nicely; at 7 P.M.. pulse 87, temperature 99.3°; slept well.

October 21st, pulse at 7 A.M. 97, temperature 99°; at 1 P.M. pulse 98, temperature 99°; hard pains; gave a pill of morphine; slept middling well during the night.

October 22d, at 7 A.M., pulse 100, temperature 99°; gave two wineglassesful of cider, which did not agree with her, and she felt very sick in consequence, with great pains in the abdomen; at 7 P.M., pulse 108, temperature 100°; slept six hours; gave three pints of milk in forty-eight hours.

October 23d, pulse 96, temperature 99.2°.

October 24th, pulse 100, temperature 99.1°; gave a pint of oat meal gruel, and 1½ pints of milk per rectum, during 48 hours.

October 25th, at 7 A.M., pulse 87, temperature 99; great pains in the abdomen; morphine given; bowels moved; sleeps well; sutures removed.

October 26th, at 7 A.M., pulse 100, temperature 99.6°; bowels moved very freely; gave milk and gruel, two pints, and diuretic medicine, a teaspoonful every 2½ hours; pulse at 7 P.M., 89, temperature 99°; sleeps well.

October 27th, at 7 A.M., pulse 97, temperature 99°; gave milk toast; at 7 P.M., pulse 87, temperature 99°; bowels moved, and slept very well during the night.

October 28th, pulse 87, temperature 99°, at 7 A.M.; bowels did not move, so gave an enema; at 7 P.M., pulse 83, temperature 91; gave milk toast and tea for dinner, and she drank 1½ pints of milk during the day.

October 29th, temperature and pulse normal; gave milk toast and corn-starch pudding; slept all night.

October 30th, pulse and temperature normal; bowels did not move so gave enema.

October 31st, pulse and temperature normal; gave bread and butter and corn-starch pudding; took off dressing and applied a fresh one.

November 1st and 2d, pulse and temperature normal; gave dried toast and poached eggs, etc.

From this time on she kept improving, and it was only a few weeks before she seemed in perfect health, and has enjoyed the same ever since. Besides, she is at present over seven months *enciente*, without any unusual symptoms.

Recapitulation: She *first* experienced pains in the abdomen the latter part of February, 1889, and was operated October 16th of the same year, a period of about eight months. Is it not strange that a tumor will grow so rapidly, if we are to reckon from that date?

From the 15th of September, 1889, to the

time of the operation, October 16th of the same year, a period of about one month, is it not astonishing that the patient could stand so much in such a short time, namely:

A miscarriage, twice tapped and relieved of over three ordinary pailfuls of water, besides sustaining the shock of such a dangerous operation?

What was the matter with the patient when she took to bed, prostrated with very high fever, acute abdominal pains, etc., the fore part of June, 1889, as before mentioned; said severe spell lasting nearly two weeks?

What was the probable cause of such a general, rapid and large dropsical effusion in this case?

Saginaw, Mich.

IS CRANIOTOMY JUSTIFIABLE UPON THE LIVING CHILD?*

HUGH M'COLL, M.D.

No more important problem than this can present itself to the physician called upon to attend a woman in labor, or engaged previously to attend a pregnant woman when labor commences, whose pelvis is not of the normal size, or at least sufficient to allow of a child being delivered alive by forceps or version at full term. A few years ago, when the mortality from abdominal sections was so great, (about 40 per cent. in Cæsarean sections), there was but little difference of opinion among medical men on this question, and the almost universal verdict was, that the child should be sacrificed, and the mother's life saved from almost certain death; and that verdict was just and right from a scientific standpoint. The advancement in surgery, especially abdominal, has, however, changed the aspect of affairs very materially. All sorts of growths, malignant and benign, that are either dangerous to the life of the individual, or cause inconvenience or pain, are attacked and removed. The wonderful success in removing huge myomas by abdominal hysterectomy, as well as a better *technique* in the operation, paved the way for the frequent adoption of Cæsarean section to save both the life of the mother and the child. As long as the early mortality was so great, this operation was only undertaken in those cases where the mutilated child could not be delivered through the mother's contracted pelvis, and then frequently undertaken after attempts at delivery by forceps, version, or craniotomy, had failed, and the mother was completely exhausted. What wonder, then, that many mothers succumbed, and that the operation as an elective measure was left to the small number in which it was certain that no amount of diminution of child would admit of its extraction.

In the light of the advancement in modern surgery and the perfection in *technique*, there should be no hesitation on the part of scientific men as to what their choice would be. There should be no hesitation whether they should attempt to save two lives, or voluntarily sacrifice one, without at the same time giving any, or but little, better chance for the other. Our duty as physicians is to save life, and to prevent and lessen suffering. From an ethical point of view, all human life is equally sacred—the life of the child unborn as sacred as that of the mother. If both can have a chance to be saved, they should have that chance. If only one can be saved, then that one which is most necessary and valuable to the living should have the choice. The Cæsarean section, or some of its modifications, to-day enables us to give a chance for life to all the children who were heretofore sacrificed, and presents no greater mortality to the mother where the operation has been deliberately chosen and the parent prepared for the operation, than did that of embryotomy, which sacrificed all the children.

Harris, of Philadelphia, gives from a collection of cases, 94 per cent. of children saved and 76 per cent. of mothers, and in the great majority of these the patients were not prepared for the operation, but it was undertaken at the last moment, without the care that should be exercised in all capital operations. Cameron, of Glasgow, has had ten cases with one death, and all his cases were not elective either; Kelly, of Baltimore, four successful cases, and one of his cases was successfully operated upon by another surgeon a second time. Many Germans report a mortality as low as six per cent. Hertsch, seven cases and no deaths.

*Read before the Michigan State Medical Society.

At the Maternity Hospital, New York, four successful cases in two years.

In all cases seen early enough, where the pelvis will admit of the delivery of a child before term, premature labor should be induced. Yet we know how hard it is to make such children live. In all cases where this cannot be done with safety to both mother and child, then Cæsarean section, or the Porro operation, should be done. Dr. Kelly, of Johns Hopkins, has so completely and graphically described the *technique* of the operation in his paper published in the May, 1891, number of the Journal of Obstetrics, entitled "The Do's and the Don'ts in Cæsarean Section," that I will not enter into details on that part of the subject.

Another question may arise just here: Whether we shall perform the conservative Cæsarean section, or the radical operation called after Porro. Is it right to leave a woman who has had to undergo Cæsarean section to save her own life, as well as the life of her child, in a condition where she will be likely to be under the necessity of undergoing the same operation again? I do not think we should leave a woman in that condition, but should, at the time of the operation, render her sterile either by removing the ovaries, (which adds to the danger and length of operation), or as Cameron, of Glasgow, recommends, ligating the tubes, (which may give rise to salpingitis and the necessity for a further operation for its relief), or to the radical Cæsaran-Porro operation. The Porro operation can be performed more readily than the conservative operation, and the danger of shock is no greater. Many operators, Kelly among them, reserve this operation for those cases in which the contents of the uterus are distinctly septic. I would choose it as the elective operation unless distinctly opposed to the wishes of the patient, who might run the risk a second time for more children. (I think but few women to-day would elect the conservative operation.) I had the opportunity of being present at one conservative Cæsarean operation, and assisted at a Porro, last summer, the latter of which I will report here. The operation was performed by Mr. Tait.

Aug. 28th, 1890. Woman about 30 years of age. In first pregnancy had Cæsarean operation performed after an attempt to deliver child dead. In second, third and fourth pregnancy, premature labor at seventh month requiring craniotomy. Fifth pregnancy, anxious to have a child. Came to Mr. Tait's private hospital and was prepared for a Porro operation. Was taken in labor early in morning, August 28th, and the operation performed at 8 A. M. Incision in median line, five inches in length through abdominal walls. Uterus was slightly adherent in front, in line of former Cæsarean section; adhesions easily separated. Hand swept over fundus in order to clear everything out of the way, then rubber tube passed round the uterus and slipped well down over the cervix, tied in a single knot loosely and handed to assistant. Incision into uterus in median line enlarged by tearing with fingers. Membranes ruptured, head presented, child extracted, handed to nurse, cord tied, placenta and membranes peeled off the uterine wall, uterus lifted out of the abdominal cavity, rubber tube tied tight, cervix transfixed by pin and tube tied a second time around below the pin, uterus cut away one inch above the pin and abdominal wall closed; stump dressed with perchloride of iron and glycerin. Time till the extraction of child, four minutes, and in two minutes more placenta was extracted and whole operation complete in thirteen minutes. This case progressed as well as any woman with natural labor, except that the healing of the stump required a little more time, and she is now free from the risk of any more necessity for operative interference from pregnancy. She left the hospital September 24th, a proud blooming mother, with a fat healthy child at her breast. She nursed her child from the first.

Lapeer, Mich.

RHEUMATISM.*

BY HARVEY J. CHADWICK, M. D.

Rheumatism is a disease of the fibrous tissue of the body, particularly of the white fibrous tissue, characterized in the beginning by the usual signs of inflammation, rarely terminating in suppuration, but frequently by hypertrophy and sclerosis of the parts af-

*Read before the Michigan State Medical Society.

fected, rendering the joints and muscles immobile and painful.

It has three forms of severity. The congestive form, which is a mere engorgement of the capillaries of the parts exposed to too sudden cooling, when the exertion in them has been of short duration and not very fatiguing, such as sitting for a considerable time listening to a speaker with neck in one position, while a draft from an open window strikes the most exposed portion, in which mere rest for a few hours is sufficient to allay the excitement in the over-distended blood vessels and relieve the accompanying pain and stiffness.

The inflammatory form, in which the congestion is more marked, attended with pain, swelling and stiffness, general increase in temperature and heart beat, derangement of the digestive organs, and acid perspiration.

The chronic form is a malnutrition of the parts involved, caused by a number of previous attack of the acute.

Rheumatism rarely attacks the human race before the age of 14 or after the age of 50, because, in the first instance, the tissues of body are soft, elastic and yielding, not capable by their resistance of creating the heat that would be created in the excessively used limbs if the muscles and ligaments were fully developed; not after the age of 50, because the fibrous tissues of the body have become less elastic, retarding violent movements, and embarrassing rapid motion, so that the tissues of the body are not liable to over-heating, and are consequently not subject to the dangers of sudden cooling, as they are during an active business life. To create heat in the body, there must be resistance akin to friction; in the two extremes of life this is rarely brought about to any extent, for obvious reasons; or if it is, the inclination of the young to be constantly on the move, prevents the hazardous effects of sudden cooling; and in the aged, discretion has taught them to cool slowly, if not by graduated movements, by applying to their bodies artificial heat, till Nature has had time to recuperate her exhausted energies caused by over-exertion, giving time for the increased flow of blood to the excited parts to be distributed to its accustomed channels.

I am sure no one will differ from me when I say the joints, and tissues near them, from excessive use, will cause an engorgement of the capillaries supplying them with blood, just the same as the excessive use of a shovel or fork will first engorge and then inflame the tissues of the palms of the hand, causing extravasation of serum in the form of blister. We have here on the one hand, then, disintegration of fibrous tissue, with more serum inside the blister than the local absorbents can dispose of; undoubtedly the blood vessels that carry blood from this blistered portion of the hand are loaded with fibrin, for we have more of it than they can dispose of. Now, if this is the condition of the part affected from friction to a small part of the hand, what would you look for in a subject that has danced, roller-skated, or walked, as fast as he can for a number of hours! At least, engorgment of the capilliaries, would you not? Now, if we bring to bear on these engorged and swollen blood vessels the constricting influence of cold air, you would expect this engorgement to be increased, and in consequence disintegration of the tissues follow. Now, fibrous tissue is composed in part of lactic acid. Then, if this fibrous tissue is disintegrated, you would expect to find lactic acid in the blood, and in the excretions of the skin and kidneys. For like reason you would expect to find an increase in the amount of fibrin in the circulating blood, as you do find in all well marked cases of rheumatism.

Cold alone does not cause rheumatism; heat alone does not cause rheumatism; wet and dampness do not cause rheumatism. I have known men to work in water for months at at time without contracting the first symptom of the disease. These are the elements commonly said to be the cause, but it cannot be proven, while we have a preponderance of evidence to show that after prolonged exertion of the body, while the body is still perspiring, if sudden cold is applied to it, painful swollen joints result. Why, then, not accept a theory that can be demonstrated as true, in every day practice?

I will mention a few cases:

A young man roller-skating till he got excessively warm, walked home through the snow; followed by painful swollen joints, acid perspiration and fever.

A janitor in a court house; floor very warm; said his feet perspired; often made frequent trips to gaol building through the snow; followed by acute rheumatism.

A physician walked rapidly to his office, perspiring, entered a cold room, and in a stooped position amputated several fingers and dressed them; followed by severe rheumatism is the back and shoulders.

These, and many other cases I have watched the history of, lead me to the firm conviction that rheumatism is caused by heating the body, or portions of it, by excessive movements or exertion, and then suddenly bringing on contraction of the parts affected by rapid reduction in temperature.

Hart, Mich.

TREATMENT OF INCIPIENT PHTHISIS BY THE SHURLEY-GIBBES METHOD.

BY W. S. BRYAN, M.D.

Mr. J. K., aged 69, commenced to fail about ten weeks ago. He coughed constantly, and expectorated much yellow muco-pus, which was sometimes green in color and sometimes streaked with blood. He grew short of breath, his appetite left him completely, and his temperature—normal in the morning—commenced to rise about 9 A.M., and reached 100½° to 102° in the evening. Then exhausting night-sweats followed. In fact, he had every symptom of consumption; also the physical signs—marked dullness over the apices of both lungs and indications of cavities forming.

Four days after beginning the Shurley-Gibbes injections, his temperature commenced to fall, and in ten days' time was normal. The cough has now almost ceased, and his expectorations are merely white frothy mucous. With the disappearance of the fever, his perspiration ceased and his appetite improved. I consider him practically convalescent, although he has still some indications of tubercular deposits in the lungs. One remarkable thing is the dryness of the respiratory sounds compared to what they were before. He, as well as his family and myself, think he has been lifted out of a consumptive's grave.

Cambridge, Ill.

Correspondence.

THERAPEUTIC NOTES.

LIQUOR SEDANS.

Editor MEDICAL AGE:

This I find to be a utero-ovarian sedative and anodyne of exceptional value, as in my hands it has produced the most brilliant and flattering results, far exceeding my most sanguine expectations.

Mrs. W., æt. 44 years, and approaching the menopause; very anæmic, thin, and of a nervous temperament; much anorexia at times; habitually constipated; complains often of headache and palpitation, with frequent but scanty micturition; menstruation very irregular, returning every three to five weeks, and lasting from two to four days; flow small in amount and nearly colorless; attended with violent pains in the lumbar region, groins, with general tenderness over the hypogastric region; no organic lesion of the heart, simply functional as a result of other lesions.

Upon examination, I detected retroversion of the uterus of the second degree, and a profuse leucorrhœa. Had previously almost exhausted the materia medica in seeking a remedy for her relief; had given Hayden's viburnum comp., aletris cordial, fluid extract viburnum prunifolium, cannabis Indicæ, etc. As a *dernier ressort*, I ordered Liquor Sedans, one drachm four times a day, to be continued during menstrual period; Fowler's solution with bromides; and an injection for the leucorrhœa; also placed a Thomas' retroversion pessary. Saw her four days later; met me with a smile and remarked the "new medicine" was going to "cure" her. Her improvement has been steady and rapid; appetite good; menstrual epoch unattended with pain; discharge higher colored and more profuse, lasting from five to six days, and more regular than before for years. Leucorrhœal discharge disappeared; does not suffer with palpitation or headaches. Such is my happy success with that grand therapeutic agent, Liquor Sedans.

PEPSIN CORDIAL.

I find the Cordial a most satisfactory remedy in infantile diarrhœa, and all summer

complaints due to faulty digestion and an acid condition or ferment in the alimentary canal. In diarrhœa with green acid discharges, in cholera infantum, in nausea and vomiting, its action is culminative and decisive. In a case of protracted diarrhœa which nothing seemed to relieve, I prescribed Pepsin Cordial, and the first two doses had the desired effect and carried the child (only six months of age) to convalescence.

ESENCIA DE CALISAYA.

I have also found this preparation a most potent agent; have prescribed with marked success in convalescence from malarial and other fevers of a low grade, and find it admirable as regards tonic and stimulant effect. Have used it freely and successfully in atonic dyspepsia and other functional derangements of the stomach.

CHAS. KELLEY GARDNER, M. D.

Huntington, West Va., August 18th, 1891.

JAMAICA DOGWOOD AND LIQUOR SEDANS.

Editor MEDICAL AGE:

I think it but just to write you as to result recently obtained by me with Jamaica Dogwood. I have used it only recently in a case of acute gastric irritation accompanied with most agonizing pain. The results were satisfactory in the highest degree. The ordinary preparations of opium had first been tried, but with negative results. In this one particular case I found the Jamaica Dogwood a perfect boon, and have no doubt that my future experience will only serve to strengthen the high opinion I have formed of its merits as one of the most valuable therapeutic additions to the Pharmacopœia. I sincerely hope that the profession on this side of the Atlantic will soon discover the value of this preparation and testify to its merits accordingly.

For a considerable length of time I have had under treatment—for dysmenorrhœa complicated with a most persistent and acute ovaritis—a lady in delicate health and extremely nervous. The usual methods of treatment yielded but negative results, and her general condition was fast becoming anything but what it should be. Having proved the value of the Jamaica Dogwood, I determined to try Liquor Sedans, as I considered its combination would certainly have nothing but a beneficial effect. My expectations were more than realized; and although my patient is still far from well, there is every prospect she soon will be entirely relieved and eventually cured. All the most urgent symptoms have disappeared; she is, at present writing, entirely free from pain, and expresses herself as feeling better than at any time since she first became a victim to uterine trouble. As a new remedial agent in this country, for the treatment of the ordinary class of utero-ovarian troubles, I feel convinced that Liquor Sedans will soon occupy first place in the minds of the medical profession.

C. C. PERRY, M.D.

17 Euston Square, London, Eng., July 22d, 1891.

NORMAL LIQUID ERGOT IN UTERINE MALADIES.

Editor MEDICAL AGE:

One year ago I attended a labor case in which there was an abnormal amount of hæmorrhage—so profuse in fact that a speedy, decided remedy was indicated. I resorted to stimulation, and the use of a fluid extract ergot. After repeated trial I found it practically useless, exciting no contractions whatever. I hastily sent for Normal Liquid Ergot (P., D. & Co.'s), when two 20-minim doses, with an interval of twenty minutes, caused the uterus to contract, with perfect abatement of hæmorrhage. I at once determined to make a practical test of the product, and for exactly one year, in thirty-four cases of uterine inertia, and consequent hæmorrhages, I used Normal Liquid Ergot, alternating in every other case with fluid ext. ergot, using the product of four different firms—three eastern and one western. In each of the seventeen cases in which Normal Liquid Ergot was employed, the effect was rapid and decided, and in one case only was there manifested any nausea or other unfavorable condition on its use. The seventeen cases treated by various fluid extracts were none entirely satisfactory; in no instance was the action so prompt, or

free from nausea and other unpleasant sequelæ. In two cases I only succeeded by the final exhibition of Normal Liquid Ergot.

The foregoing is my experience after a thoroughly practical trial. Of the result I have only to say, Normal Liquid Ergot has best served my purpose, a few points being paramount:

1. Speedy, prompt and decisive effect:
2. Freedom from unpleasant sequelæ:
3. Comparative small dose required:
4. And greatest of all, it has succeeded, which is the one feature we desire.

I have thus practically proved the product a superior one.

M. K. Bowers, M.D.

1319 North 6th St., Harrisburg, Pa.

CASCARA SAGRADA IN RHEUMATISM.

Editor Medical Age:

During the spring of 1889 I was suffering (as I had been for the past 15 years) with pain in the right sciatic nerve. A short time before I read a paper by Dr. Goodwin on Cascara Sagrada in Rheumatism. This induced me to try it on myself. I took Parke, Davis & Co.'s Fluid Extract, formula of 1887, in ten drop doses, three times daily. When I got through I was happy and feeling good; so well pleased was I that I ordered two pounds as a precautionary measure.

I have since found it necessary to take a few doses occasionally in order to keep in good working order. In my practice I use Cascara Sagrada in nearly every case of rheumatism, whether acute, sub-acute, or chronic. I believe its direct action is upon the sympathetic ganglionic system of nerves, influencing favorably the involuntary organs supplied by these nerves, and this is best done by giving the drug in small doses, 5 to 15 drops; it matters not how large the dose, no laxative effect will be produced for 24 hours. If the dose is large, a light frontal headache will come on in from 6 to 12 hours. If the dose is properly adapted or given in sufficient quantity, the only appreciable effect will be a much better feeling in bodily health and activity, the bowels moving easily without pain, and apparently in the natural way.

J. W. Hawkins, M. D.

Canton, Mo., Aug. 23d, 1891.

LIME JUICE AND PEPSIN IN DYSENTERY AND FEVER.

Editor Medical Age:

I find Lime Juice and Pepsin excellent to allay thirst, and that irritable, qualmish state of the stomach in which it rejects all nourishment, especially in dysentery and fever. I add six drachms to the pint of carbonated water; a tumbler is filled with broken ice and the carbonated water, lime juice, etc., added to fill the glass, when it may be sipped, *ad libitum*. It has a most grateful and soothing effect on the stomach and enables it to take and retain nourishment. In the *malaise* and loss of appetite preceding dysentery and summer complaint, it has been very valuable in restoring the tone of the digestive organs (used as above) and thus warding off a threatened attack. I communicate these facts believing that it will prove a boon to this class of sufferers.

T. Williams, M. D.

189 Wisconsin St., Milwaukee, Wis.

THE TREATMENT OF CYSTITIS.

In answer to a correspondent of the Age regarding the treatment of cystitis, it may be properly said, according to the best authorities, to consist of urinary antisepsis, medical treatment, and medico-surgical treatment. An antiseptic condition of the urine may be produced by the administration of oil of wintergreen, which, under several experienced observers, has given excellent results. The borate of sodium, according to Terrier, has given rise to gastric troubles, while the benzoate of sodium and benzoic acid have been proven inefficient in producing the desired effect. Bazy having tried salol, found that the drug is very well borne, even by the most delicate and rebellious stomachs, in doses of one and a half drachms, although one-half to one drachm is generally sufficient. This occasionally, not always, causes a diminution in the pain and smarting during micturition. The elimination occurs generally on the first day, but may be delayed twenty-four hours, and may continue during one or two days, and even more, after the stoppage of the drug. The cases in which salol acts most efficaciously are of purulent catarrh of the bladder, when

it should be given in doses of from fifteen to thirty grains. Salol does not act, however, to any appeciable degree upon suppuration of the urinary passages.

Antisepsis of the urinary passages is perfected by observing antiseptic measures in regard to the instruments which are used. Boiling water is generally sufficient to disinfect all metallic instruments. Should the bladder require washing out, it should be done with sterilized instruments; and the fluid used should be a solution of boric acid or of dilute silver nitrate. In patients in whom the entire organism has become infected, it is necessary to prevent the infection from becoming aggravated by suppressing the cause as far as is possible. This requires a careful investigation into the condition of the bladder, the uterus, and the kidneys. Secondly, elimination of the poison by the natural emunctories should be facilitated—by the skin, through the aid of sudorifics; by the kidneys, by means of revulsives over the lumbar regions, and large quantities of diluent drinks. It is also necessary to destroy the poison in the system by means of quinine, and to increase the resisting powers of the patient by the use of tonics. To repeat, antisepsis of the urinary passages comprises the administration of salol in half-drachm doses daily for two or three days before the operation, intra-vesical douches of boric-acid water (3 parts to 100), and the disinfection of the instruments employed.

The medical treatment of cystitis includes, primarily, injections of morphia. Barley-water, linseed tea, and other diuretics will calm the pains attendant upon micturition by freeing the urine from its irritating properties. The mineral waters have little action in the treatment of painful cystitis. Rest is an important element in the management of these cases. Opium, chloral, bromide of potassium, and belladonna, should be given for the pain, and purgatives and enemata for the relief of the constipation.

The Journal de Médecine de Paris gives the following prescription for cystitis in women:

℞ Citrate of potassium, ʒ ss.
Fluid extract couch grass.
Tincture of belladonna, āā ʒ j.
Fluid extract buchu, ʒ ss.
Water, sufficient to make ʒ iv.

A teaspoonful in a wineglassful of water three times a day.—Ed.]

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

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DETROIT, MICH., SEPT. 10, 1891.

Editorial.

TREATMENT OF VOMITING OF PREGNANCY.

In an analysis of the ætiology and treatment of this dreaded complication of pregnancy, Dr. F. Blume, in a paper read before the Allegheny Medical Society, emphasizes the fact that in some cases this condition is not amenable to treatment. He believes, however, that there are three classes of cases which may be relieved by the administration of drugs: 1. Women who, prior to gestation, have been afflicted with diseases of the stomach, as chronic gastritis and gastric ulcer: 2. Women of an unusual nervous irritability, and: 3, Hysterical women.

In cases of the first category, sub-nitrate of bismuth, bicarbonate of sodium, Carlsbad water, oxalate of cerium, tincture of nux vomica, etc., may be tried, and will sometimes be found of decided value, while the nervines and sedatives may give relief to nervous and hysterical women. Opium and its preparations, the bromides and chloral, either administered by the mouth, by the rectum, or hypodermatically, as circumstances require, are the medicinal agents which have the best reputation, and which, in these cases, sometimes successfully depress the reflex irritability, and thus alleviate the symptoms. Blisters, the application of chloroform, ether, and of the Faradic current to the epigastrium, of the ice-bag to the dorso-lumbar region, have been tried, and afford relief in some instances.

The resort to local treatment is indicated in all those cases in which a morbid condition of the uterus has been made out. Retroflexion and retroversion are to be corrected, and, if necessary, the uterus retained in position by a suitable pessary. A congested vaginal portion may be relieved by

scarifications, while the application of carbolic acid, or of a ten-per-cent. solution of nitrate of silver, to the eroded cervix, will often prove successful in mitigating the distressing symptoms. Faggard states that in Vienna a ten-per-cent. solution of nitrate of silver is employed in all cases of severe vomiting, irrespective of the condition of the vaginal portion. "The weight of testimony in favor of this simple procedure, collected from innumerable sources, is so great as to make its employment absolutely obligatory before resorting to more radical methods."

Dilatation of the cervix—Copeman's method—has proved successful according to some writers, while others report negative results. In the only case of severe vomiting which Blume observed, it had a most remarkable effect. The nausea disappeared instantly, but only for a few hours. The method was again applied, but no result was obtained the second time.

Horwitz recommends that in the severer cases of vomiting the patient should be placed at rest in bed in the horizontal position, that the room be darkened, and if the stomach rejects everything, rectal alimentation resorted to; crushed ice to quench the thirst is allowable. Blume fully endorses this plan.

When these various methods have failed, when the vomiting actually is uncontrollable and seriously endangers the patient's life, the induction of abortion or premature labor is indicated, and will, if done in time, to a certainty save the woman.

THE ABOLITION OF THE CORONER.

In a scholarly paper read before the Section of State Medicine at the last meeting of the American Medical Association, Henry O. Marcy, M. D., points out the abuses of the existing coroner system, the necessity for reform, and the progress that has been made in Massachusetts in providing for medical examinations and inquest in cases of death by violence, abolishing wholly the office of coroner.

The investigation of the laws in Massachusetts led to the conclusion that the office of coroner demanded two entirely distinct classes of functions to be discharged by one and the same person. These duties were both legal and scientific, and each in turn might involve questions of the greatest magnitude, often requiring the highest skill and experience in two great branches of learning. A further investigation showed that in matter of fact the office was generally regarded as political, and the appointees were more commonly men versed neither in law or medicine, and, as a consequence, were necessarily unfitted for the proper discharge of either of the main subdivisions of their duties. This was brought so clearly to the notice of the proper authorities that the manifest unfitness of the law for the complex requirements of modern life was plainly apparent, and Massachusetts abolished her entire system of coroner laws, and established in their place provision for medical examinations and inquest in cases of death and violence.

This new system has been in operation in Massachusetts for about twelve years, and deserves adoption in all states. It has now the commendation of judges, prosecuting officers, and the general public, and may fairly be pronounced a step in the direction of purifying the public service.

The objects to be acheived are:

1. To abolish the office of coroner:
2. To dispense with jury service:
3. To separate the medical from the legal duties in all cases involving the examination into the causes of death where crime is suspected:
4. To entrust the medical examination only to competent medical officers properly trained in their work:
5. To make the number of these medical officers as small as consistent with the proper discharge of their duties:
6. To consign all questions of law only to properly qualified legal magistrates:
7. To remove the appointment of these officers entirely from the question of political consideration; and to be based only upon their possession of the requisite and proper qualifications.

Upon some basis of this character should the coroner's laws be revised. Much useless expenditure of time and money will be avoided, often great sorrow and anxiety will be prevented, and what is of vastly greater importance, the ends of justice will be far better served.

REGULATION OF EXPERT TESTIMONY IN ACCIDENT CASES.

S. W. Latta, M. D., calls attention in the University Medical Magazine to the necessity of the regulation of expert testimony in accident cases. He believes the variance of the testimony of experts must eventually bring the medical profession into disrepute, and cites well authenticated cases in which justice and equity were violated through the conflicting testimony of experts.

Dr. Latta regards the remedy for the growing evil to be the enactment of laws such as the following, which would secure exact justice:

An Act Relating to the Examination of Persons by Medical Experts Appointed by the Courts in connection with suits pending before them.

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same: That in any suit where the question of the mental capacity or the physical condition, or extent, character, or effect, of injuries sustained by any person or persons may be in controversy, the court in which such suit is pending shall, upon the application of either of the parties to such suit, appoint one or more experts, who shall, after being duly sworn or affirmed to discharge their duty with fidelity, and, after notice to the parties, make full examination of such person or persons, and make report thereon in writing to the court, which report shall be filed with the record of the suit, and may, so far as relevant, be read as evidence at the trial, subject to the right of either party to call such medical expert or experts for examination in chief or for cross-examination.

SEC. 2. That if any such person or persons shall refuse to submit to examination by such expert or experts, the court shall make such order, where the refusing person is a plaintiff, for the entering of a non-suit.

SEC. 3. That the fee of each of such experts shall be fixed by the court, but shall not be less than ten dollars nor more than one hundred dollars, and shall be taxed as part of the costs of the case.

THE FUNCTION OF THE PANCREATIC JUICE.

Some recent investigations would seem to indicate that there is still much to learn about the separate and combined action of the digestive ferments.

D. B. K. Rachford read a paper before the Tenth International Medical Congress in which he reports the results of some interesting experiments which would tend to establish the theory that the bile does not assist in the emulsification of fats, as has been taught, but interferes with emulsification, decomposing fats into glycerin and fatty acids.

Discouraged by Heidenhain's attempts to make permanent pancreatic fistulæ in dogs, he made use of temporary fistulæ in rabbits, in this way always securing fresh juice for his experiments. The portion of the duodenum containing the end of the pancreatic duct was resected, brought to the surface of the abdomen, and the pure juice obtained through a glass cannula inserted into the open end of the duct.

Taking the pancreatic juice so obtained, it was shaken up with a neutral olive oil for a moment, and then the two allowed to separate. A drop from the supernatant oil was then pipetted off and dropped upon a ¼ per cent. solution of sodium carbonate. This operation was repeated every three minutes until a perfect spontaneous emulsion was formed.

As an average of his experiments, he found that about twenty minutes was required to form the perfect emulsion under these circumstances; or, in other words, the juice would produce 3½ per cent. of fatty acid in the oil in twenty minutes. These experiments were conducted at the ordinary temperature of the room, 18° C (64.4 F.). When the mixture of the oil and juice was kept at the temperature of the body, the fat-splitting activity of the juice was doubled, and the 3½ per cent. of fatty acid was formed in about ten minutes.

The emulsions formed in this way had all the peculiarities of emulsions formed with neutral oil to which a definite amount of fatty acid and sodium carbonate solution had been added.

The most important feature of his experiments, perhaps, was his determination of the influence which the other digestive agents had upon the fat-splitting properties of the pancreatic juice. Representing the activity of the juice at room temperature by 20, the addition of dilute hydrochloric acid was found to reduce this activity to 13, while the addition of the principal constituent of the bile, viz., the glycocholate of soda, increased

it to 44. When the glycocholate of soda and hydrochloric acid were both added, the activity was still further increased, being represented by 56. That the other ingredients of the bile were not unimportant in this connection, was shown by the fact that the juice and bile alone had an activity of 64. The greatest effect, however, was obtained by a mixture of pancreatic juice, bile, and hydrochloric acid, the activity of the mixture being 80, or four times that of the pancreatic juice alone.

It is to be hoped that further investigations of the action of the digestive ferments will clear the way to their intelligent and satisfactory therapeutic application.

THE SECOND CONGRESS FOR THE STUDY OF TUBERCULOSIS.

This Congress assembled at Paris, July 27th, and discussed the pathogenesis and therapeutics of tuberculosis.

The conclusions reached are especially interesting, as the value or inutility of several of the much vaunted methods of treating tuberculosis was clearly defined.

Arloing, in a very thorough paper, taking up first the diagnostic value of this substance, showed that certain tubercular animals presented no reaction to Koch's "lymph," while other animals, perfectly healthy, showed considerable reaction. In regard to its curative power, he found it never arrested or retarded the tubercular process; on the other hand, frequently hastened it.

Of the other forms of treatment it can be truthfully said that the later the theory and the shorter the time for clinical experience, the more hopeful and brilliant are the results.

Redard reported the remote results of the injection of iodoform dissolved in oil, in cold abscesses. He cleansed first the cavity with naphthol and water; in this way the unpleasant effects of iodoform were avoided. The results have been very good in closed cavities, less favorable in cavities with fistulæ or open spaces.

Hericourt reported the results of the injections of the serum of the dog in human tuberculosis. These experiments were begun on animals in 1888, and tried on man in 1890. He divides his observations into two groups; in the first, twenty-five cases of tuberculosis in the third stage, the results were perfectly *nil;* in the second series of patients in the second stage, dyspepsia was diminished, appetite improved, and vomiting checked, but the bacilli persisted in the sputum. Bernheim reported the transfusion of the blood of the goat. The results were negative. Semmola has tried the combination of iodoform by the mouth and the injection of dog serum. He is at present unable to present a single case of genuine cure, although he feels encouraged to continue.

The treatment by compressed air charged with medications, preferably creosote, was discussed, although Seé, its chief advocate, was not present. No cases of cure are reported. The injection under the skin of large doses of creosote and oil was mentioned, but not recommended.

The use of chloroformized water, salts of lead, especially the acetate, inhalations of osmic acid, camphorated injections of olive oil, antiseptic injections of guiacol, eucalyptol, arsenite of strychnia, and iodoformized guaicol, were also discussed. No definite results could be claimed for any of these methods.

Undoubtedly, the form of treatment which attracted the most attention was the surgical injections of Lannelongue. It is apparently simplicity itself; simply the injection subcutaneously of a solution of chloride of zinc. Lannelongue exhibited to the Congress, at the Hospital Trousseau, thirty children treated by this method, most of them suffering from tubercular joint trouble. In those cases which had received nine or ten injections, and had been under observation for three months, there was apparently improvement. There was diminution in the volume of swelling, formation of new tissue, and return of articular motion.

A NEW VACCINATION INSTRUMENT.

The dangers of infection by tainted lancet or needle during vaccination, have been pointed out to the Paris Academy of Medicine, and a suggestion made that a separate instrument be used for each person. Dr. Mareschal, proposed to use an ordinary steel pen, specially pointed, for the purpose, that might be held between the fingers or put into a special holder. Being of very moderate cost, a fresh pen may thus be used for each operation.

Book Notices.

STORIES OF A COUNTRY DOCTOR. By Willis P. King, M. D. With illustrations by T. A. Fitzgerald. pp. 397. Second edition. Published by Hummel & Parmlee, 612 Drexel Building, Philadelphia. Price $1.00.

The varied experiences of a country doctor are well worth recording, and their variation by such an interesting *raconteur* as Dr. King, brings vividly before the reader the comedy, tragedy, and vicissitudes of the checkered existence of the country practitioner.

The characteristics of the class of patients to whose ills the country doctor ministers, are humorously drawn by the author who, in relating his experiences, touches on many topics of much historical interest.

Dr. King crystallizes his experiences into talks on The West; Education and Pioneer Schools; Old-Time Dances and Parties; Civilization and Pioneer Weddings; Peculiarities of Pioneer People; Then and Now; Superstitions, Traditions, and Foolish Ideas; Preacher Doctors, Midwives, and Nurses; The Branch Water Man; The Ups and Downs in Early Practice; Benevolent Designs; Death-Bed Confessions and Repentance; Sham Suicides; Liars and Their Lies; Consultations and the Code; People who Annoy Doctors; Did He Kill His Wife; Going Back to College; Quacks and Quackery.

SYLLABUS OF THE OBSTETRICAL LECTURES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA. By Richard C. Norris, A. M., M. D. Second edition; pp. 198. Published by W. B. Saunders, Philadelphia. Price, $2.00.

The purpose of this book is to secure for the student a logical and consecutive outline of his work in this branch of medical practice, and to aid him in classifying the knowledge he acquires in the lecture room.

In this second edition the author has elaborated the chapters on Infant Feeding, Pathology of the Puerperium, Obstetric Operations, and Dystocia, and to make it more readily available for reference has indexed it.

A feature of the book which will make it popular with students is, that every other page is left blank permitting of the addition of further notes.

Notes and News.

Life-Shortening Occupations.—

One of the curious features of modern life is the extent to which the most hazardous trades are overrun by applicants for work. The electric light companies never find any difficulty in obtaining all the linemen they need, notwithstanding the fact that the dangers of that kind of business have been demonstrated times without number. The men who work in factories where wall-paper is made, frequently joke one another over the tradition that a man's life, in this trade, is shortened ten years. A similar belief is prevalent in factories where leather papers are made, and among men who have to handle them, and whose lungs are said to become impeded by inhaling the dust arising from such papers. In certain other factories where brass ornaments and fittings are made, the air is laden with very fine brazen particles which are, when inhaled, especially irritating to the lungs. But one of the most singular advertised calls for employés that was ever printed, appeared recently in a Connecticut newspaper, signed by a firm engaged in the business of building towers. It called for applicants only among those who are young, strong and courageous, and closed by saying: "We warn all seekers for this job that it is of the most dangerous nature, and that few men continue in it more than a few years. In fact, it is almost certain death to the workman who follows this occupation."—*Jour. Amer. Med. Association.*

A New Disease of Americans.—

According to Dr. Lange, perityphlitis, or appendicitis, is unusually common in America, and particularly in New York, one surgeon, for example, having encountered twenty-one cases in a period of eleven months. This Dr. Lange attributes to two of our National failings, that of eating too much, and chewing too little, the result of which is constipation. Contributory causes of the prevalent constipation are our hurrying, restless, nerve-straining lives, which lead us to ignore the demands of Nature. Fæcal accumulation sets up trouble in the mucous membrane of the cœcum. So-called fæcal calculi are often

found, but very rarely foreign bodies—much more rarely than was formerly believed—as causes of appendicular disease. The presence of pent-up secretions in the appendix is prone to set up an inflammatory condition, and this may pursue its course without destroying the integrity of the appendicular wall, or it may lead to extra-cœcal suppuration, which is almost always situated within the peritoneum, rarely between the layers of the meso-colon, and almost invariably accompanied with perforation of the appendix. —*Medical Record*, August 29th, 1891.

Eucalyptus as a Disinfectant in Sick-Rooms.—

Sir Ferd. von Mueller, of Melbourne, has suggested the use of green eucalyptus branches in sick-rooms, a plan which he considers applicable in all infectious and contagious diseases. It is said to have proved successful with phthisical patients, not only upon antiseptic grounds, but also by reason of the sedative influence of the shrub upon the cough. The branches should be placed under the bedsteads, and renewed, when necessary, every other day. In this country such an easy method of disinfecting sick-rooms would be highly appreciated. Unfortunately, however, it is not possible to obtain the necessary green eucalyptus branches, when required, with the same facility as we can provide ourselves with coals or any other commodity.—*British and Colonial Druggist; N. Y. Med. Jour.*, Aug. 22d, 1891.

New Editorial Staff of Journal of Balneology.—

A. N. Bell, A. M., M. D., of Brooklyn, Frank Woodbury, A. M., M. D., of Philadelphia and Geo. H. Rohé, M. D., of Baltimore, will in future conjointly direct the editorial department of this journal.

The well earned reputation of these gentlemen is sufficient assurance they will discuss with authority the subjects coming within the scope of this publication.

Drs. Bell and Rohé have long been prominently identified with the progress of sanitary science in this country, and as authors of important works on climatology, balneology and hygiene. Dr. Woodbury is too well known as an accomplished medical editor, and writer on dietetic subjects, to require further introduction.

The Medical Bureau of the Columbian Exhibition

Has been organized in Chicago, under the medical directorship of Dr. J. E. Owens, assisted by Drs. Allport, Yeager, and Plummer. A temporary dispensary and emergency hospital has been constructed, where medical and surgical attendance and medicines are furnished to employés, of whom there are already over two thousand on the exhibition grounds during the day, free of charge. The Bureau is amply equipped with instruments, medicines, operating-room furniture, stretchers, cots, and an orderly. The City Police Department has furnished a patrol wagon for ambulance service, to be used until a permanent ambulance has been constructed, and the Exposition Company provides horses, harness and driver. The present Bureau, operating during the construction period, will be the nucleus of the medical service of the Fair.—*Medical Record*, August 22d, 1891.

Punished for Betraying a Professional Secret.—

A prominent gynæcologist in Germany was recently found liable for $1,600 damages, besides being condemned to pay a fine of $100, for having published clinical notes of some of his cases in a gynæcological treatise. His fault consisted in publishing the names of his patients in conjunction with the clinical accounts.—*Medical Record*, Aug. 22d, 1891.

New York Medical Examiner.—

Dr. G. W. Wells, of New York, is to issue a journal to be known as the Medical Examiner. It will be devoted to medical matters connected with life, accident, and marine insurance, the army, navy, police, fire department, pension service, railways, etc. From its announcement it should prove a success.

A Hospital for Marasmic Children.—

The Paris Municipal Council has decided to build a pavilion in connection with the Maternity Hospital for the reception of newborn children who, after the recovery of the mothers, require special attention. Accommodation is to be provided for twenty infants. —*Medical Record*, August 22d, 1891.

Therapeutic Brevities.

The Treatmenl of Acute Dysentery.—Foremost among single remedies administered for the cure of dysentery, stands sulphate of magnesia, and other salines, so long used as to be considered standard or classical. This succeeds well and quickly with that large class of cases of simple catarrhal dysentery, which tend to recover in a few days even without treatment. Another favorite treatment with a large class of practitioners is, the repeated administration of large doses of ipecacuanha. With this treatment remarkable success has been achieved.

But the local treatment of localized inflammation is always rational if the inflamed area can be reached. So it seems more logical to apply remedies directly to the inflamed colon by enemata than to use the more indirect and uncertain course of the entire digestive tract.

After a dysenteric passage, place the patient on the right side, and, by means of a syringe—which gives a continuous and gentle stream, and does not throw water in forcible jets,—let flow into the colon from two to four quarts of water, which has been very weakly salted, and is as hot as can be comfortably borne. When that has been retained as long as possible, perhaps as long as five minutes, and expelled, charge the syringe again with a half pint of water in which has been dissolved five grains each of chloral and sulpho-carbolate or zinc, and let it flow into the rectum, to be retained, the patient keeping the recumbent position.

This entire procedure is to be repeated after each dysenteric passage.

With some patients, the amount of water mentioned will not be borne without great pain. As pain should not be caused, of course judgment will be used as to the amount, according to the case. Also, in the case of children, the amount of water would be proportionate to their size. So, as to the amount of chloral and zinc required in the second part of the treatment, a good general rule would be, one grain of each for each year of the child's age up to five.

In regard to the second part of the treatment, use any mild and soothing astringent—sulphate of zinc, alum, acetate of lead, (or in the country) a decoction of white oak bark, or whatever you prefer, providing only that it be mild and unirritating. In fact, in the great majority of cases, the second part of the treatment may be omitted entirely, one or two thorough flushings with hot salt water proving sufficient to cure.

This treatment does not preclude the use of any systematic treatment preferred by the physician. However, we believe that in very few cases will he feel the necessity of giving any medicine, except to correct malarial or other coincident affection of the system. The flushing, if thoroughly done, seems to answer the double purpose of removing all irritating matter, and arousing biliary and other secretions.—*Medical World.*

A New Treatment of Typhoid Fever.—In the Brussels Journal de Médecine, Dr. Tordeus describes as new his method of treating typhoid fever. It consists in a combination of antipyretic and antiseptic measures. The remedies employed are acetanilid as an antipyretic, and resorcin or thymic acid as an antiseptic. The combination of the two bases is not new, in this country at least, many American physicians having for a long time used antipyretics in combination with carbolic acid, mercuric chloride, salicylic acid, or boric acid, in the treatment of typhoid fever. But the combination of the particular remedies, and the results of such combination, are novel and worthy of note. By this combination the author has invariably succeeded in reducing the temperature of typhoid fever patients to about normal, and sometimes even below that point, with such small doses of the remedies as would have produced no effect whatever if used separately. For example, the dose usually employed by Dr. Tordeus was three-quarters of a grain of thymic acid and from a grain and a half to two grains of acetanilid, repeated not too frequently—say once in two hours. If by such doses a typhoid-fever temperature can be reduced from 104° F. to normal or near that point, the antipyretic must be re-enforced by the action of the other drugs, for certainly the quantity of acetanilid alone would produce no such reduction. No unfavorable symptoms were produced in any of the author's cases by the action of the drugs or by the rapid reduction of temperature; and, as his records seem to have been carefully kept, the method seems well worthy of trial.—*N. Y. Medical Journal*, Aug. 22d, 1891.

Use of Hyoscine.—In a paper in the Journal of Medical Science (Dublin), Dr. Lionel Weatherly has a very strong word to say in favor of hyoscine in certain conditions. There is little doubt his warning against mistaking it for hyoscyamine is not unnecessay, and it is now high time that it should be recognized that in these two substances we have to deal

with alkaloids of very different characters, from the point of view at least of the clinical physician. Dr. Weatherly believes strongly in the powers of hyoscine as a mental alterative. He found if particularly useful in that form of mental disturbance which renders the patient violent and abusive, restless and domineering—a nuisance to every one who has anything to do with him. Under the administration of repeated small doses such a patient becomes a changed man. Violence and abusiveness give place to an amiable politeness, and instead of indulging in the free exercise of an extensive if somewhat shady vocabulary, the patient subsides into silence. These are the cases in which Dr. Weatherly finds the drug most useful, and in which he believes it acts as a true mental alterative. It is also, he says, a useful drug in delirium tremens, and in other disease in which tremor is a marked symptom, such as disseminated sclerosis; and it has the great advantage of being in most circumstances quite safe. It is not without reason that Dr. Weatherly enters a word of warning against its indiscriminate use as a sudden and powerful hypnotic; yet there would appear to be no doubt that it finds its greatest, and probably its most useful, application, in the treatment of maniacal violence and noisiness, and that, at least in ordinary hospital work, it is a drug for emergencies.

Treatment of Morphinomania.—Two steps in advance have recently been taken in the provision for the treatment, in an institution, of morphine and allied narcomaniacs. One is in England, the other in America. Under the Lunacy Act of 1890, morphine or other inebriates may be received as voluntary boarders into licensed houses for the insane, with the consent of two Commissioners of Lunacy, or two justices, by simple applications without specifying the cause for which the applicants desire to be admitted. The American step is the opening of a home at Brooklyn for the reception of twelve *habitués* of morphine, cocaine or chloral, of whom one-fourth are to be free patients, if an endowment fund of £12,000 can be raised for the latter purpose. The treatment pursued is preliminary sedation by sodium bromide, and a rapid reduction of narcotic, the period of reduction averaging from ten to twelve days.—*Brit. Med. Jour.*

Simple Treatment for Nocturnal Enuresis.—An ingenious and simple method of treatment for a very troublesome disorder was suggested at the International Medical Congress by Dr. Van Trenton, of La Hayne. He stated that the nocturnal enuresis of children was due to insufficiency of the sphincter vesicæ, which allowed the urine to flow into the upper portion of the urethra, from which it was then expelled by reflex action of the detrusor urinæ. The fact that the child wetted the bed two hours or so after going to sleep, proved that it was not due to distension of the bladder. His treatment consisted in preventing the urine from running into the urethra by raising the foot of the bed. He had cured fourteen children in this way, taking the additional precaution of having them empty the bladder just before retiring, and of giving no liquid at this time.—*Medical Summary.*

Saw Palmetto in Prostatitis.—For the encouragement of those who have written me in regard to the use of saw palmetto in my case reported in the Medical World, in January last, I am glad to be able to say that improvement still continues, and my faith in the remedy stronger than ever. I have received letters of inquiry from physicians and laymen. My case was as bad, or worse, three years ago than that of any who had written me; also I am older, being nearly 78; and yet by long perseverence have so far recovered that I do not need the use of the catheter, and the gland is much smaller and no pain or tenderness.—H. Knapp, M.D., in *Medical World*, July, 1861.

Smoothing out Wrinkles.—The Medical Press is responsible for the statement that a curious application has been made of the absorbable properties of lanolin in the treatment of wrinkles. When well rubbed in lanolin passes directly into the skin and acts as nutriment to the subjacent tissues, with the effect of smoothing out the folds produced by the attenuating of these structures incidental to age. Several elderly ladies who were induced to give this method of treatment a trial, are said to have been delighted with the result.—*Medical Record*, Aug. 29th, 1891.

Liquor Sedans as a Utero-Ovarian Sedative.—Dr. O. Merton Belfry, of Saginaw, Mich., writes: I have used liquor sedans for a year and a half. I find it *par excellence* the best utero-ovarian sedative; one with which no other similar preparation can be compared. I have prescribed it in 273 cases without failure. Many of these were relieved as if

by magic; the others were improved after a time. By selecting proper cases, it will always succeed in alleviating, and in a large percentage of cases will effect a permanent cure.

The Iodides in Scrofulous Children.—Iodine and iodoform give better results than the alkaline iodides. To young children, tincture of iodine may be given, one drop daily in a little thin porridge made of farina and milk. Besnier (Le Bulletin Médical, 1890, p. 595) prefers the use of iodoform, which may be given continuously for a long time. He prescribes it after the following formula:

℞ Iodoform, gr. jss.
Mellis, ʒ iv.—M.

—*Amer. Jour. of Med'l. Sciences*, Sept., 1891.

Preparing the Skin for Antiseptic Operations.—Dr. F. W. Langdon, of Cincinnati (Lancet-Clinic), calls attention to the value of benzin as a solvent of oily secretions in the preparation of skin areas for antiseptic operations. An agent that can penetrate and disinfect the pores and follicles of the region to be operated upon, has advantages not possessed by any of the watery solutions in common use.—*Medical Record*, Aug. 29th, 1891.

Chlorosis.—Dr. Brinton recommends the following combination of iron and arsenic in the treatment of chlorosis in young women:

℞ Acidi arsenici, gr. 1-60.
Ferri sulphatis.
Potassii carbonatis, ää gr. jss.

M. et fiat pilulæ. Sig.—Begin with three and increase to six pills daily.

—*College and Clinical Record.*

To Check the Secretion of Milk.—The application of a solution of camphor, one part in oil of turpentine six parts, has been recommended. Care must be taken to prevent injury to the skin, for such a mixture would irritate strongly if kept long in contact with the integument under an impermeable dressing.—*Medical Record*, Aug. 29th, 1891.

A Cure for Viper Bites.—The Academy of Medicine of Paris has awarded the Orfila prize to Professor Kaufman, of the Veterinary College at Alfort, for a lotion for the cure of viper bites, consisting of one part of chromic acid dissolved in one hundred parts of water.—*Med. Record.*

Medical Progress.

Treatment of Common Colds in Children.—The affection commonly called a cold consists, in its mild form, in a congestion of the mucous membranes of the respiratory tract, attended first with an outpouring of serum, and subsequently of mucous and muco-pus. The cold may be limited to any part of the respiratory tract, but the nose and naso-pharynx are the portions generally involved. Frequently the process begins in the nose or throat, but, when the patient comes under observation, the bronchial mucous membrane is affected. The stage of congestion is of brief duration, especially in those who are more or less subject to colds; hence, when seen by the physician, the affection consists in an acute or sub-acute catarrh of the mucous membranes involved.

The nature of the process, as seen in children, does not differ from that in adults. Children are, however, more prone than adults to develop bronchial catarrh, and the nasal catarrh is, in the former, more apt to become sub-acute and even chronic. The chief reason for the latter fact is doubtless to be found in the relative helplessness of children, who cannot cleanse their noses properly, and are often neglected by their parents. Another reason for the preponderance of these catarrhs in children is, the difficulty attending treatment.

For a cold in the congestive stage, the child may be given a hot bath and put to bed, well wrapped in blankets, to encourage free perspiration. Veratrum viride and aconite may also be of distinct service; one or the other should be given in doses suited to the age of the patient to produce the effect desired. The atmosphere of the room need not be above 70° F., but while the mucous membranes are dry and parched a certain degree of moisture will be grateful to the little patient. This moisture can be provided by having a steaming teakettle in the room, or by keeping a pan filled with water on the stove. If there should be no stove in the room, a gas-jet may be utilized, first suspending over it on top of the shade a sheet of wire, such as is sometimes used to avoid the scorching of a table-cloth by a hot coffee-pot. The best device for use in the sick-room is a Bunsen burner made with a flat circular top two inches in diameter. The gas-jets are made to emerge horizontally in a radiating manner beneath this top. The whole Bunsen burner can be screwed on an ordinary bracket in place of the customary burner. On this burner a tin cup or other

small vessel can be placed, and the room quickly filled with vapor, medicated or not, as desired.

In the first and second stages of a nasal catarrh, menthol is an excellent remedy. I am in the habit of ordering it in crystals, having about a third or half of a teaspoonful placed in water, and heated gently until it begins to steam. The menthol vapor is liberated very rapidly. One must regulate the quantity of menthol and water in accordance with the size of the room, especially its height, and not keep doors and windows open unless the vapor of the menthol should become too pungent. As the menthol vapor is irritating to the mucous membrane of the eye, I prefer to use it in the sleeping-room of the child at night after it is asleep.

In the second stage of acute rhinitis, benefit will be obtained from the local use of a weak solution of salt in warm water, say about a fourth of a teaspoonful of salt, or even less, to a tumbler of water. The salt-and-water solution is so soothing that children who get over the first fright at having any liquid put into the nostrils, no longer make any objection. I have found a medicine-dropper the most serviceable instrument for instilling the lotion. Thorough cleansing of the nasal passages cannot, of course, be performed in this way, but on the other hand there is less risk of causing an acute inflammation of the middle ear than if a syringe were used. At a later stage in the catarrhal process, an extemporaneous solution can be prepared by adding to a weak salt-water solution minute quantities of soda and borax. Such is especially indicated when there is a tendency for the secretion to become thick and purulent and for crusts to form. I have found a five- or ten-per-cent. solution of menthol in almond oil, applied to the nostrils with a pledget of cotton or a camel's-hair brush, also very helpful. The local applications, with inhalations of menthol at night, as a rule soon affect a cure in a subacute rhinitis.

When a child is disposed to "catch cold" easily and frequently, there is often a strumous habit present, and the tonsils are often enlarged. In such cases cod-liver oil, begun in the autumn and taken until the following spring, effects a great improvement. I have seen no good results from the syrup of iodide of iron, but the syrup of hydriodic acid has seemed to do good.

As a rule, before a cold subsides, there is more or less bronchitis, from extension of the catarrhal process. Generally only the larger and middle-sized tubes are affected. Local remedies are here of great value. In infants and very young children, a stimulating liniment containing oil of amber, camphor, and oil of turpentine, with soap liniment as a vehicle, is very serviceable. Poultices are, as a rule, not needed in mild cases of bronchitis occurring in the course of "colds." They can, however, be of great service. In using them in these cases, I prefer to have them applied at night. They should be large enough to cover the entire chest, anteriorly and posteriorly. Strips of tape passed over the shoulders and fastened with safety-pins to the muslin of the poultice will aid in keeping in place. The poultices should be thin, and preferably of flax-seed meal, with an addition of one part of good mustard to 16 or 20 parts of the flax-seed, according to the age of the child. The proportion of mustard should be small, as it is desirable the child should sleep the entire night in one jacket-poultice.

When the flaxseed and mustard poultices are made up with glycerin and white of egg, a larger proportion of mustard can be incorporated, and the poultices can also be kept on longer, without risk of blistering the patient.

For older children, painting the chest gently with iodine once a day (in the morning), until the skin becomes somewhat tender, is better than the application of liniments or poultices.

In these cases of mild bronchitis, inhalations of oil of turpentine, or still better, oil of eucalyptus, are decidedly helpful. In the houses of the poor they can be given by keeping the patient in the kitchen and having on the stove or range an open vessel of water containing about a teaspoonful of the oil to a pint of water. It may be desirable to have the patient sleep in the kitchen at night.

Of internal remedies, nothing is better than chloride of ammonium. It is best given at intervals of an hour or two, in doses appropriate to the age of the patient. When it has seemed necessary, I have sometimes induced the mother to take the chloride for the benefit of the nursing infant.

It is true that, so far as life if concerned, the majority of these cases would not terminate seriously if no treatment were employed. But it cannot be denied that in some cases a grave catarrhal pneumonia would be the ultimate result of a neglected cold, and in many others neglect to treat the case would lay the foundation for an obstinate chronic naso-pharyngeal catarrh, with all its unpleasant consequences. We cannot, therefore, afford to be indifferent to the treatment of these

common colds.—H. B. Allyn in the *Medical News.*

Resuscitation in Suspended Animation from Chloroform.—As an illustration of the uncertain knowledge which exists upon this subject, may be cited the belief that drawing out the tongue will raise the epiglottis, and thus open the airway to the lungs. This belief generally exists, and the procedure is universally employed. By way of correcting the error, Benjamin Howard, before the Royal College of Surgeons, England (Braithwaite, lxxiv, from the Lancet, October 27th, 1889, page 819), demonstrated that: First, contrary to the universal belief, traction of the tongue can not raise the epiglottis: Second, by sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by effort of another, whether in the healthy, in the dying, or in the dead, the epiglottis is instantly and beyond prevention made completely erect: Third, by a complete extension of the head and neck, the tongue and velum, as respiratory obstructions, are removed simultaneously with the epiglottis, and without a moment's delay the entire airway may be straightened and made free throughout by the nearest person.

These facts being recognized, one source of fatal delay will be avoided. The surgeon will resort to the simple procedure of extending the head by placing the fingers of each hand under the angles of the lower jaw, which will be carried forward while extending the head. Thus the pharyngeal space will simultaneously be increased while raising the epiglottis.

The next cardinal indication after extending the head is: Stimulation of respiration and circulation.

The majority of references on this subject indicate a preference for the Sylvester method over that of Marshall Hall. In the decision of this question it is to be borne in mind that death from chloroform may be occasioned either by arrest of pulmonary or cardiac action. It is likewise admitted that it is seldom known in the emergency which is the primary failure, hence it would seem rational to prefer the method which had the greatest likelihood of simultaneously stimulating the action of both organs. I believe the Sylvester method of raising the arms and thus expanding the chest through the action of the pectoral muscles, is calculated to secure the admission of the greatest amount of air to the lungs; but, while this is the case, I am convinced that the rolling method of Marshall Hall, which throws every member into motion and enables the weight of the patient as well as that of an attendant to be rendered efficient in the expulsion of the blood from the heart, combines in a superior manner the double advantage of a stimulant to the circulation, at the same time that it secures the continuance of respiration. The opinion is therefore urged, when the body is in a horizontal posture with the head extended, and the patient threatened with suspended animation, to roll him in a vigorous manner, not to exceed once in two seconds.

Should audible respiration not follow after a few rotations of the body, the next cardinal indication urges itself upon us, viz.: Secure cerebral vascular dilatation in the simplest manner, and in the shortest possible time.

This indication is based on the fact that chloroform causes a contraction of the cerebral vessels, to overcome which there are but two practicable means, viz.: Inhalation of nitrite of amyl, and inversion of the body.

It might be urged that the guide for practice in a desperate case should be the guide in all cases. In a desperate case, the absence of respiration (except that of an artificial character), and the delay which would often occur in procuring the drug, would militate against amyl in favor of mechanical inversion.

Nélaton, I believe, was the first to perform the experiment of restoring functional action after the suspension of animation by inversion of the body. A number of mice were rendered comatose, and, after waiting for a time, every alternate one was taken by the tail and swung in the air, thus forcing the blood to the brain by centrifugal motion. It was observed that those not so treated died, while most of the others survived. This experiment became the basis of practice in his critical cases. In the event of failure to restore animation by artificial respiration in the horizontal posture, he resorted to suspension of the body head downward, and while in this posture practiced the Sylvester method of artificial respiration.

This method has not been practiced to any extent in this country.

On December 10th, 1890, I administered chloroform to a lad fourteen years old, for the purpose of cauterizing a chronic ulcer. The boy was vigorous and healthy, took the anæsthetic kindly, and all was effected without a ripple of difficulty. While the dressing was being applied, and after the chloroform had been entirely removed, he suddenly ceased to breathe.

I had seen arrest of respiration many times,

and simply proceeded to roll the patient according to the method of Marshall Hall, several minutes, to no effect. Still I rolled. I dared not change this for any expedient in which I had less faith, so continued to an unknown period, while the hands became cold and the lips purple. I was filled with a painful realization that unless something radically different was done in a very few minutes, a dead boy would be on my hands. Nélaton's method suddenly entered my mind; the boy's ankles were grasped, and a moment later his knees were flexed over my shoulders, his head and arms dangling towards the floor.

Without stopping for classical preparation, he was subjected to a double-quick motion around the operating room; and after about three minutes my ears experienced the welcome sounds of restored respiration. At first air was heard to enter at considerable intervals, which became shorter until it was deemed safe to place him again on the table. No sooner was this done than breathing again became arrested, and a resort was a second time had to the suspension, which was followed very soon again by restored respiration.

Each step was taken with a springy motion by which the weight of the intestines resting upon the diaphragm would be alternately applied and removed with the tread, the effect of which would be to stimulate the heart and force the blood along its channels, while the air was simultaneously changed in the lungs. Besides this, the head being in the most pendent position, the arteries of the brain were necessarily mechanically dilated and furnished with the largest amount of the best blood, in harmony with the mechanical fact that the pressure, and hence the increase of calibre, must be greatest at the most pendent point. The brain would therefore receive a disproportionately large amount of the acquired oxygen. Besides, the motion can not otherwise than transmit numerous shocks to all parts of the dangling body, thus acting as a stimulant to the nervous system.

Since my experience with this case I have had three others, which in my conviction would have died but for the execution of the method just described.

The second was the case of a young woman of large size undergoing an operation for entropium. She took the anæsthetic badly, being one of those who are either too much awake to permit the operation to be performed, or in constant danger of complete suspension of animation.

When about half through the operation, respiration was suspended and every effort to restore ineffectual. Though the procedure seemed indelicate, the life of the patient outweighed modesty, and suspension was resorted to earlier than in the former case. The weight of one hundred and forty pounds was a great deal to carry, but the task was continued until breathing was restored.

The third case was a little girl seven years old; the operation tenotomy for strabismus. The anæsthetic was taken under protest, with struggling, but no complication arose until after completion of the operation. The patient was closely watched, and the alarm given immediately, so that no delay occurred after the arrest of respiration, which was simultaneous with dilatation of the pupils.

Marshall Hall's method was commenced, but with no success. Finally the ankles were grasped, the child converted into an acrobat doing the pole act, and the surgeon into a pack-horse. The effort was continued for an indefinite period, during each moment of which the sounds of renewed respiration were anxiously awaited. Yet no sounds were heard and the worst was feared. Still I trudged on until compelled by sheer exhaustion to stop. The child was placed upon the table, when it was first found that breathing was noiseless and regular, and the period of consciousness almost reached.

The fourth case was that of a physician. Toward the close of the operation no chloroform was administered, and the breathing was regular.

Suddenly, as has so often been reported, breathing ceased, and the lips became ashen. Rolling was at once resorted to, but failed. Death, I am convinced, would have followed but for the timely resort to a repetition of the above-described method. A few turns about the room effected the restoration of function, and the patient was again placed on the table.

I do not wish to be considered unduly enthusiastic in advocating this procedure, for I well know that it has both theoretical and practical objections. Theoretically, it has occurred to my mind that the blood-pressure caused by the suspension, especially in certain enfeebled or degenerated conditions of the walls of the cerebral vessels, might result in apoplexy. Though this danger may exist, when the time for action was at hand, it seemed so insignificant in comparison with that of impending death, that the choice was made without hesitation.

A practical objection which might be made is, that the weight of an individual may be too great for the strength of the surgeon or nurse to permit the body to be carried in this pendent manner and subjected to the requisite vertical motion which, it is conceived,

materially aids in the stimulation of both respiration and circulation.

Should one doubt his strength in a certain case, it is recommended that the knees be flexed over an ordinary table five feet long, and held by an assistant while the table and patient are inverted, after which the Sylvester method can be practiced as recommended by Nélaton.

In conclusion, the cardinal indications may be summarized as follows:

1. Secure free admission of air by extension or suspension of the head.

2. Provoke simultaneously respiration and circulation.

3. Obtain cerebral vascular dilatation by inversion of the body, nitrite of amyl, or both.—Dr. A. E. Prince in *N. Y. Medical Journal.*

Treatment of Epilepsy.—Under this head Poulet, of Plancha-les-Mines, in Bulletin Général de Thérapeutique, writes of a combination of bromide of potassium with Calabar bean, which has given him success in the treatment of obstinate cases of epilepsy where the bromides alone had failed. A favorite formula of his is:

Bromide of potassium, 100 parts.
Tincture of Calabar bean, 35 parts.
Water, 470 parts.

Dose. A tablespoonful, to be increased to a tablespoonful and a half, then two tablespoonsful, daily.

A tablespoonful contains about 57 grains of bromide, and about 16 minims of the tincture. The medicine may be given in divided doses instead of in one full dose, half a teaspoonful being given at first twice, then three times, then four times a day.

Poulet reports five obstinate cases treated in this manner. These were cases where bromide alone failed to cure:

1. The fits were formerly six or eight a week (*grand mal*). After a year of the new treatment, no return of the epilepsy. In this patient the tincture of Calabar bean is occasionally replaced by eserine in the dose of one-sixty-fourth of a grain to each fifteen grains of bromide; the result has been the same. No contraction of the pupil has been observed during the administration of the medicine.

2. A most obstinate case; had been epileptic for eight years, eight or ten fits a day. Failure of bromides given alone, also of bromides and picrotoxin. Definitive cure under bromides associated with tincture of Calabar bean.

3. Also a case of chronic, inveterate epilepsy. Several months' treatment by the combination specified gave exemption from all convulsive accidents.

4. A case of grave epilepsy at the menopause; frequent daily vertiginous attacks ending in convulsions and stupor. At first the disease was successfully combated by bromide of potassium associated with picrotoxin; this combination afterward failing, sulphate of atropine was substituted for picrotoxin (ninety grains of bromide of potassium and one-sixty-fourth of a grain of atropine daily). The latter treatment has been kept up for a year, with complete cessation of the vertigo.

5. A case of cardiac epilepsy; the *grand mal* attacks were followed by hemiplegia with stupor and hebetude (*état de mal*). A combination of bromide and digitalis caused disappearance of the epilepsy (120 grains of bromide associated with 30 minims of tincture of digitalis in divided doses daily).

Poulet terminates his article by the following conclusions:

The bromides remain the sheet anchor in the treatment of epilepsy—and by the term "bromides" we have especial reference to the bromide of potassium, which alone is truly efficacious.

There are, however, a great many epileptics whose attacks are only mitigated or postponed, not completely suppressed, by bromide of potassium.

In such cases, if we associate the bromide with some medicament which possesses properties identical with those of the bromide (that is, being capable of anæmiating and de-congesting the nerve centres and paralyzing the system of voluntary muscles), we generally attain results which are perfectly satisfactory in essential epilepsy, and even in partial or Jacksonian epilepsy, on condition that, in the latter, we begin by the specific treatment of the determining cause. The substances that have been most successful are, Calabar bean, picrotoxin, and belladonna. In cardiac epilepsy, digitalis must be added.

We may indifferently substitute sulphate of eserine for the preparations of Calabar bean, sulphate of atropine for those of belladonna, and digitalin for digitalis.—*Amer. Jour. of the Med. Sciences*, September, 1891.

Functional Albuminuria.—It is conceded on all sides that there is a functional albuminuria which is usually intermittent in character, and which does not necessarily indicate structural disease of the kidneys. The questions to be solved are, the pathology of

this condition, the methods of recognizing and treating it, and of deciding as to the prognosis. With regard to the pathology, an immense number of observations and studies have been made. These all go to show that functional albuminuria may have widely different causes. Although in a single case several factors may be at work, they can be broadly differentiated, according to Dr. Brannan, into three classes: The dyscrasic; the mechanical; and the neurotic.

The various subdivisions are shown in the following scheme:

Class I. Dyscrasic.	Hetero-albuminæmia. Digestive. Oxaluric. Hepatic. Gouty.
Class II. Mechanical	Cyclical. Albuminuria of adolescents.
Class III. Neurotic.	Mental anxiety. Intellectual effort. Excessive physical fatigue.

Under the dyscrasic class come those forms due to the presence of dialyzable albumens in the blood, which in turn are due to deficient activity of the skin, excess of albumen in the blood from various causes, deficient action of the liver, digestive disturbances, etc. The albuminuria of persons with a gouty tendency, or oxaluria, comes under this head.

Under the head of mechanical types of albuminuria come the cyclical albuminuria of Pavy, which is found in persons of weak circulation and low vaso-motor tone. The albuminuria is thought to be due to a venous stasis. Such patients have albuminuria a few hours after rising, owing to the fact that an increased weight of blood is thrown on the renal veins.

Neurotic albuminuria occurs in persons who suffer from severe worry and mental strain. It is thought to be due also to a weakened state of the renal vaso-motor centres causing venous stasis, so that there is here an underlying mechanical element, as there is also in the albuminuria following physical exercise.

As to the frequency of functional albuminuria, Dr. Lambert says that among apparently healthy persons applying for life insurance, the percentage of cases of albuminuria is two per cent., rising to five per cent. in very cold or very hot weather. Dr. Brannan says:

"In the course of the last seven years I have examined 365 persons, mostly males, for life insurance. Of this number, 54, or 14.8 per cent., had more or less albumen in their urine. This is probably a much larger percentage than would be found in the general population. The same fact has been noted in England, and Dr. Rabagliati explains it by saying that the well-to-do who apply for life insurance suffer more from urinary diseases than the ordinary population, mainly because well-to-do people eat and drink too much. For the purposes of comparison, I examined, a few years ago, the urine of one hundred consecutive male patients at the Roosevelt Hospital Out-door Department. In not more than five per cent. did I find albumen without other symptoms of Bright's disease."

Thus it may be assumed that in adults the percentage of cases of functional albuminuria ranges from two to five.

With regard to the prognosis of such cases, opinions have to be formed for each individual case. On the whole, it may be said to be favorable, yet the condition is always pathological, and not free from dangers.

General rules for dealing with such cases cannot be better formulated than is done by Dr. Davis in the Medical Record of June 13th, 1891.—*Medical Record.*

SUNSTROKE.—The following circular has been issued by the Pennsylvania State Board of Health:

This dangerous illness is caused by excessive heat of the blood (from 100° to 110° F.), which produces great depression of the nervous system. It occurs during the hot season of the year, and usually to those exposed to the hot sun, but it sometimes occurs at night, and also to those exposed to great heat, in glassworks, laundries, furnaces, bakeries, iron-foundries, and the engine-rooms of steamships. It is largely confined to the hot close streets and passages of the cities, but is not unknown in the country. Those habituated to the use of alcohol, and the debilitated, are especially predisposed to attacks.

Dark close-fitting clothing, such as compresses the chest and neck, should be avoided during the heated term. For those obliged to labor in the sun, light clothing and a straw or light felt hat, permitting free circulation of air, are preferable.

On very hot days one should drink frequently, but in small quantities. A large quantity of any iced drink entering the stomach at one time is injurious.

Cool water into which oatmeal has been stirred, is a safe and refreshing drink. Water should not be drunk in considerable quantities at a temperature lower than that of spring water, namely, 56° F. Immediate death is often caused by "ice-cold" drinks. The immoderate use of alcoholic beverages is also dangerous.

The sleeping-room should be freely ventilated and cool. Constipation of the bowels should be avoided. When overheated, work slowly, frequently cooling the head, chest, and back, with cold water. Keep a wet cloth or some green leaves in the hat on the head, frequently wetting them with cold water. When, on a very hot day, the skin becomes dry and uncomfortably hot, a burning sensation is felt in the head, and the face is flushed and the eyes bloodshot, with a frequent tendency to urinate, the person should immediately quit work, retire to a cool place and rest in quietness; and if not speedily relieved of the sensation of heat, take a cold bath.

The attack may be very sudden and take the form of delirium in which the patient rushes wildly about; and may attack those around him; or he may become weak and sink to the ground as if in a fainting spell or stupor. Loss of consciousness and mental disturbance may be only partial. Nausea or sickness at the stomach often precedes the onset. Convulsions may occur.

Sunstroke must be carefully distinguished from heat-exhaustion, in which the general symptoms are similar to those of sunstroke, but the bodily temperature is below the normal. The difference can be at once recognized by feeling the skin underneath the clothing: In sunstroke the skin feels burning hot; in heat exhaustion it is cold.

Treatment.—1. Carry the patient into a cool and shady place, where there is plenty of pure, fresh air.

2. Strip his clothing to the waist, and place him in the recumbent position.

3. Pour cold water (ice-water is best) upon his head and chest until consciousness returns. The points at which the blood may be most effectually cooled are the wrists, the temples, and the ears, because at those points it approaches the surface more nearly in considerable quantities. Ice may be applied to the head and chest, and rubbed over the body, but if the skin is cold no ice should be applied. Internally, small doses of brandy may with success be administered; but in all cases of sunstroke the patient should, as soon as possible, be placed in charge of a competent physician.

The patient should do no mental work for some months, and should keep free from all excitement. Persons who have once suffered from sunstroke are liable to a second attack. Insanity in some of its varied forms frequently follows sunstroke.

In heat-exhaustion, give alcoholic stimulants and place the patient in a hot bath, so as to raise the bodily temperature.—*Medical News*, Aug. 29th, 1891.

An Indictment of Corrosive Sublimate as a Disinfectant.—In an article entitled "Corrosive Sublimate as a Disinfectant Against the *Staphyloccccus Pyogenes Aureus*," published in the Johns Hopkins Hospital Bulletin, Dr. A. C. Abbott brings forward some strong arguments against the efficacy of this agent as an antiseptic. To the employment, he says, of sublimate solutions upon wound surfaces, it is plain that there are at least two serious objections. First, the albumen of the tissues and fluids of the body tend to diminish the strength of, or indeed renders entirely inert, the solution employed; and second, the integrity of the tissues is materially injured by the application of solutions of this salt.

The first object cannot be met with certainty, for the surgeon possesses no means by which he can determine the amount of albuminous material that is an almost insuperable obstacle to complete disinfection with sublimate. He is, therefore, never in a position to say, *à priori*, that his efforts at disinfection of the wound are, or are not, successful.

The second objection is equally serious. During the past two years we have had sufficient evidence to lead us to believe that the normal tissues and fluids of the body possess the power of rendering inert many kinds of organisms which may have gained access to them. This function is therefore diminished, or, indeed, may be quite destroyed, by any agent which brings about alterations in the constitution of these tissues. We know that just such changes as those to which we refer follow the application of sublimate solutions. It is plain, then, if we bring about in these tissues a condition of superficial necrosis, the condition following upon the application of sublimate, they are much less able to resist the inroads of infectious organisms than they would have been had they been left in their natural condition.

As a disinfectant, in the strict sense of the word, there are perhaps few substances which possess the property in a higher degree than corrosive sublimate, but at the same time there is nothing which is employed for this purpose that requires greater care in

manipulation in order to obtain its best results. Its action is influenced by a number of conditions which in practical application it is difficult, if not quite impossible, to control.

For these reasons we seem hardly justified in continuing to give it the first place in the list of substances which may be employed practically for the purpose of rendering harmless materials containing the germs of infectious maladies.—*Medical Record.*

Local Treatment of Dysentery.—In acute dysentery, involving the colon high up, Dr. H. C. Wood has found large enemata, containing two or three drachms of subnitrate of bismuth, much more efficient than the exhibition of bismuth by the mouth. When the symptoms are severe, this local treatment may often be preceded with advantage by washing out the colon with large quantities of cold water. He has never used injections of nitrate of silver in acute dyssetery, although the effect of the local application of the nitrate in other inflammations of the mucous membranes would justify trial of the remedy. He has seen in one or two cases, large enemata of very hot water injected without affording relief, and believes that hot water enemata are, in their ordinary results, not at all comparable with large injections of ice-cold water.

When the lower part of the colon is affected, the local use of ice sometimes has an almost marvellous effect. The author has seen the whole aspect of a very severe and alarming case, in which the symptoms indicated the colon was affected high up, changed in a single hour by the continuous use of ice suppositories. While it is not necessary to have the pieces of ice entirely regular in shape, care should be exercised that no sharp edges are left. The suppositories should be rapidly used, one being put into the rectum every three to five minutes, so as to get, for at least half an hour to an hour, the effect of the continuous application of cold.

When tenesmus is very severe, iodoform suppositories are often much more efficient than opium in bringing relief. A remedy which has been from time to time recommended very highly in dysentery, but has not been much used, is ergot; and when the passages contain large quantities of blood, or are nearly pure blood, the extract of ergot would seem to be indicated. Dr. Wood has never used ergot by the mouth in these cases, but has employed suppositories containing twelve grains of ergot extract and four grains of iodoform, used every two hours until four or five suppositories had been taken, with seemingly, great advantage.

The local treatment of dysentery is not advocated as a substitute for the use of mercurials, purgatives and ipecacuanha, etc., but as a very important adjuvant to the older forms of treatment. Nevertheless, in the author's experience, the effect of local remedies has been more prompt and decided than that of drugs given by the mouth; and in cases of any severity the attack upon the disease may be made from each end of the mucous tract.—*University Medical Magazine.*

The Treatment of Stammering.—According to returns founded upon German statistics collected during the last sixteen years, the average number of stammering school children in Berlin and elsewhere amounts to about 1¼ per cent. of the total number in attendance. The causes of this defect, and the appropriate methods of dealing with it, are discussed by Mr. E. J. Seltman in Physique. He observes, it is needless to seek for ætiological conditions in the organs of speech themselves, or even in the nerves associated with them. The stammerer, if his mind is at ease, does not stammer. It is in the presence of circumstances, varying in different cases, which to him suggest some imaginary difficulty, that his impediment becomes apparent. Concurrently with this comes a feeling that he *must* speak. Intelligence and will together urge him to do so; the purpose is met by his conscious unreadiness, and the consequence is the marred result with which he himself and his companions are painfully familiar. His impediment therefore is imaginary. The remedies appropriate to his condition, if somewhat slow in operation, are not far to seek. They consist essentially in a change, a disentanglement of his perverted mental energies. All mental shock is to be strictly excluded. The habit cannot be cured by order. He must be approached with tact, and habitually addressed in a quiet, slow, and deliberative manner. His imitative instinct will copy the method, and fluency will usually succeed the faculty of correct utterance thus engendered. When we reflect upon the frequently high intelligence of stammering children, the drawback imposed upon their education by this unfortunate habit, and its equally hurtful influence upon their usefulness as adults, we cannot too strongly impress the necessity of its early and methodical treatment. A course of three months will often suffice to attain the desired results.—*Lancet* (London).

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Original Articles.

FOUR CONSECUTIVE CASES OF CHISELLING OF THE MASTOID PROCESS.

BY GEO. CLEARY, M. D.*

CASE I.—*Acute otitis media in the course of typhoid fever followed by spontaneous perforation of the mastoid; two operations; recovery.*

Mary McC., æt. 24, domestic. On November 21st, 1890, I was asked by the late Dr. Clifford to see this patient, who gave the following history:

When beginning to convalesce from an attack of typhoid fever, she was taken with acute ostitis of the right side. This occurred ten days before my call, which was followed in a day or so by a purulent discharge from the ear.

At the time of my visit she had a very profuse discharge from the ear with slight redness and tenderness behind the auricle. I advised weak carbolized injections for the ear to be followed by insufflations of boracic acid; also hot fomentations over the mastoid region. About ten days after, I was again requested by Dr. Clifford to see the patient, and found the ear discharge had not in the least abated, and that, moreover, she was suffering very severe pain back of the ear, intensified at night, and with increased swelling in this locality and evidence of fluctuation. The same afternoon, assisted by Dr. Clifford, the patient being etherized, a free incision was made behind the ear through the infiltrated tissues down to the bone. This gave vent to a drachm of pus; the probe entered a small fistulous opening in the mastoid. I decided not to go any further but to wait the effect of the operation. Irrigated wound with carbolized solution and applied a poultice; ear treatment as before.

December 1st.—She has been free from pain since operation; discharge from ear much reduced, but a free flow of pus from incision. Sleeping well at night, but now complains of stiffness and soreness in the neck. I find a board-like hardness beneath the mastoid process running down the side of the neck with redness of the integument. Ordered frequent hot fomentations over latter and other treatment continued.

December 14th.—Infiltrated tissues in neck somewhat reduced, but swelling and redness over mastoid process increased and quite tender over apex of the bone. The probe passes into furrowed cavities in the bone. Ear discharge very slight; walls of meatus not swollen; general condition much improved; temperature normal; pulse 100; appetite good, and sleeps well.

It, however, now became evident that the mastoid must be thoroughly opened up by removing any dead or dying bone present, making a freer exit for the pus and a better opportunity for cleansing and drainage. On the same day (December 14th), I entered the knife over the apex of the mastoid, and carried it directly upward for two inches over the site of the former incision. The depth of this cut was three-quarters of an inch; some pus escaped; the periosteum, found separated from the bone, was pushed to either side, and Allport's retractor inserted. The outer table was found honeycombed. With straight chisel and mallet, all the diseased portion of the surface of the bone was removed, and soon came down to the cells which were bathed in pus. With gouge and sharp spoon I made a good sized cavity, leaving the process not much more than a shell. Syringed excavation with carbolized solution; dried parts, and insufflated a mixture of boracic acid and iodoform into the wound; next inserted a large silver drainage tube, packed wound and soft tissues with cotton, and bandaged.

After this, patient made a rapid recovery,

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without a single unfavorable symptom. She walked to my office one week after last operation, and continued to report daily thereafter. All tenderness, redness and swelling disappeared from side of neck; no further pain complained of in head; slept and ate well. The cavity in the bone gradually filled up with healthy granulations. The drainage tube was reduced in size from time to time, and on February 7th, not quite two months after last operation, she went out to service.

Local treatment was the same throughout, namely, irrigating the wound with carbolized solution and insufflating with iodoform and boracic acid mixture until the soft parts healed over.

I have seen her occasionally since the last date. She has become fleshy and strong, and is in every way well. The last time I saw her she was wearing a little plug of cotton in place of the tube.

All that is necessary to report further in this case is, that the ear discharge ceased entirely three days after last operation. The drum-head healed over, and hearing in this ear at last report was 8–40, by the watch.

CASE 2.—*Acute inflammation of the left middle ear followed by abscess over temporal region; mastoiditis; chiselling; recovery.*

Mr. W., æt. 47, merchant. Was treated by me four years ago for acute purulent inflammation of the right middle ear, which had developed some threatening complications before I saw him. The latter, however, gradually yielded to treatment, and in due time the otorrhœa ceased, the perforation in the membrana tympani closed, and hearing became re-established.

September 27th, 1890, he again called on me concerning an acute otitis of the left side which had set in a few days before, but, as I was about leaving town, I advised him to consult another aurist.

November 26th, 1890, two months after my last visit, I next saw him again. His head was enveloped in a shawl, and he presented every appearance of having gone through a severe siege. He was pale and feeble looking, and told me he had been under daily treatment, in and out of bed, since I saw him in September; that he had been and still was, suffering tortures in the head; and wanted to know if I could give him relief; if not, he would endeavor to go East and try his fortune there. I advised him to return to his former specialist, and have another consultation with one who had previously seen him during the severe part of his illness. He returned three days later, and requested I take him in charge.

On examination, I found a large swelling above the ear which gave evidence of fluctuation; the mastoid region reddened slightly from the effects of a blister, but not swollen; a free purulent discharge from the ear and the osseous portion of the meatus congested, the lumen so contracted transversely that with difficulty could I pass a small piece of cotton on a probe. No view of the drum-head could be had; great stiffness of the jaw on the same side complained of, and could only open his mouth about half an inch. I told him I would open the abscess above his ear next day. I was summoned hurriedly to see him the same evening, with word that he had been taken with chill and vertigo. I went at once, and found him in bed, with his wife holding his hands trying to overcome in this way the disagreeable effects of the dizziness. Dr. Burns, who accompanied me, administered ether; the hair was removed, and the parts being cleansed with a bichloride solution, I made a free incision, commencing an inch above the tip of the ear, carrying it downwards and forwards for two inches, cutting through the periosteum. A tablespoonful of pus escaped; the bone was somewhat roughened and the periosteum detached. Syringed wound with carbolized solution, dried parts, insufflated iodoform and boracic acid mixture, inserted silver drainage tube, and applied cotton and bandage over wound. There followed after this a marked improvement in every way. He slept without anodynes; appetite improved; pain and dizziness disappeared.

Ten days after the operation the irrigating fluid passed through wound and out the external meatus. Taking iron, quinine, and light wines.

December 15th (a little over two weeks after operation)—He was able to come to my office and began to attend to business.

January 14th, 1891—Cut entirely healed,

and all swelling in vicinity gone; still there is a purulent discharge, though slight, from the ear, and meatus remains narrowed and reddened. I could not yet get a satisfactory view of the membrana tympani. When cotton was passed deep into the canal it became stained with blood, and there was evidence of granulations. Instilled in the ear, alcohol, silver nitrate solution, etc., without making any impression either on the discharge or swollen tissues of the meatus. General condition, however, very good, sleeping and eating well, and no pain to speak of.

February 21st—I thought I noticed a gradual decline of vigor for a week or so before this date. Complexion more sallow, a frequent habit of rubbing the left side of his head back of the affected ear as if it were uncomfortable there; still said it did not ache. He seemed to me as if he were assuming a cheerfulness he did not feel. When questioned closely he admitted he had headaches more or less lately, and that he was not feeling either as well or as strong as a week or two previously. There was no swelling or redness over the mastoid, no pain on pressure, but a decided wincing when this part was percussed. Temperature 99°; pulse 88.

Taking into consideration the constant otorrhœa, no lessening of the swelling and congestion of the osseous meatus, the uneasy feeling back of the ear, and pain over the mastoid on percussion, with tendency to headache and signs of failing general health, I concluded it would be no longer prudent to delay the performance of a radical operation, namely, opening the mastoid process, and in this way afford the best chance of warding off the approaching danger.

I operated the same afternoon at the patient's home. There were present Drs. Burns and Steadman, both of whom concurred as to the necessity of the operation and subsequently gave valuable assistance. When the patient was under the influence of ether, I made an incision commencing at the apex of the mastoid process, and carried it upwards for two inches, keeping parallel with, and somewhat less than a half an inch from, the base of the auricle, dividing the tissues down to the bone. A small artery spurted, which was caught and twisted. The periosteum was found closely adherent to the bone, and with a raspatory I separated it to the required extent and introduced an Allport retractor. The bone seemed perfectly healthy. By mallet and chisel, slightly above the level of the spina supra meatum, I made an opening in the bone from above and behind downwards and forwards, removing a little over half an inch in length by somewhat less in breadth of the outer table. Diplöe was next encountered which was well developed; free oozing of blood occurred from the latter. After this was controlled, a round chisel was substituted and the cells opened up. These seemed in a normal condition, but rather compact; no pus being so far encountered, I chiselled these away carefully, inward, forwards, and slightly upwards, in the direction of the antrum, until I had a funnel-shaped opening in the bone of half an inch deep. I now with a probe began to examine the cavity thus formed, when it passed through a small aperture in the bottom, and pus at once welled up. Enlarging this opening with a steel director and bone knife, there escaped altogether about a drachm of pus. An unsuccessful attempt was now made to pass fluid through this aperture into the middle ear. The justification for the operation was now evident. After smoothing off the bone and cleansing and drying the wound, a mixture of iodoform and boracic acid was insufflated; next a silver drainage tube inserted, and borated cotton packed in the wound around the tube; a layer of dry cotton over this, and a bandage. The patient rested well the same night.

February 15th (third day after the operation).—Temperature 99° and pulse 88. Moderate amount of pus through tube and no discharge from the ear—I may say in anticipation that no further discharge from the ear took place. The wound was dressed daily with carbolized injections, insufflations of iodoform and boracic acid, moist carbolized cotton, dry cotton pad, and flannel bandage. Prescribed quinine and wine.

February 21st.—Temperature and pulse normal; no pain in masticating food; jaw no longer stiff, feels comfortable; appetite returning.

March 7th.—Swelling of external auditory canal gone; drum-head can be plainly seen,

somewhat thickened; perforation closed. He drove out to-day for the first time since the operation.

From this time on he rapidly regained health. All previous uncomforable symptoms disappeared; wound entirely healed, except the part occupied by a small silver tube, which he was still wearing when he left for Europe, last May, three months after operation. Hearing = 3–40 by the watch.

Case 3.—*Spontaneous perforation of the mastoid with swelling of the corresponding side of the head and face following right acute otitis media; chiselling; recovery.*

Mr. S., æt. 40 years, merchant. Was brought to my office by Dr. Maggard, March 19th, 1891. The following history was obtained:

Six weeks before was attacked with acute inflammation of the right middle ear, followed by purulent discharge a few days subsequently; pain steady, and at times intensified, radiating from the ear over the whole side of head. Given daily administration of anodynes for its relief; confined to bed most of the time. Free purulent discharge from the ear uninterrupted; usual remedies used without any marked effect on the disease. He presented the appearance of one having suffered severely, and looked exhausted from his recent exertion to reach my office.

On examination I found considerable swelling over the right side of head and face; this œdematous condition made its appearance three days before. His ear stood straight out; there was some swelling and redness over the mastoid, with evidence of fluctuation confined over a small area of the process. The external meatus filled with pus, and after the removal of this by the syringe, I discovered a fibrous-looking granulation as large as a slit pea, springing from the floor of the canal, and other curtain-like granulations hanging apparently from the roof of the inner portion of the osseous meatus, hiding from view the membrana tympani. The meatus was reddened, but with fairly large calibre. For certain reasons Dr. Maggard and myself decided to temporize for a few days.

December 22d.—No abatement of the symptoms having taken place, we determined to open the mastoid the same afternoon. Patient's pulse 84, and temperature normal.

Under the influence of ether, I made an incision down to the bone, commencing at the apex of the process and carrying it upwards for two inches. About half a teaspoonful of pus escaped. Separating the periosteum from the bone with the raspatory, I inserted an Allport retractor. The bone looked normal, but with a probe I found a small smooth fistula under the base of the auricle, into which it readily passed to the depth of half an inch. With this aperture as a guide, I chipped off the outer table from above and behind, downwards and forwards, opening up the perforation. Continuing with the gouge, I came down to a cavity filled with a a pulpy mass of broken-down cell structure, when pus made its appearance. With a sharp spoon I scooped out all broken-down tissue, making a good-sized cavity. About half a drachm of pus escaped from the interior of the bone. Free welling up of dark blood for some time continued to fill the cavity formed. No communication with the middle ear was demonstrated. After bleeding was stopped, I irrigated parts with carbolized solution, dried with cotton, insufflated iodoform and boracic acid mixture, inserted a large silver drainage tube, filled the wound with carbolized cotton, and applied dry cotton and bandage over all.

March 23rd (day after operation).—I called and found him up, dressed, and eating at the table. I advised him to go back to bed and to stay there until he got permission to rise. He said he was feeling so much relieved that he felt like being about; pulse 84, and temperature 99°. Some blood and a small quantity of pus on dressing. Dressed wound as before, and syringed ear with carbolized solution.

March 24th.—Slept all night without anodynes; no pain in head except slight soreness in wound; pulse 78, and temperature 98⅘°; feels well.

March 27th.—Was up and dressed; swelling above ear and on side of face about gone; wound doing nicely; very little pus on dressing, and no discharge from ear. Same treatment daily at house as before.

April 4th.—Came to my office where he was afterwards attended. Nothing special

to record after this date; not a single unfavorable symptom appearing.

He was in my office the last time May 18th, not quite two months after the operation; the wound was then healed, except that part occupied by a small silver tube; had been attending actively to business for some time and was feeling in the best of health. The granulations in the external auditory canal had entirely disappeared. Membrana tympani whole. Thickened some, but approaching a normal color, and hearing distance by the watch = 7–40. I will close this case by stating that the otorrhœa ceased five days after operation and did not again return.

Case 4.—*Acute purulent inflammation of the right middle ear involving the mastoid cells; chiselling; recovery.*

Miss G., æt 21. I was called to see this patient by Dr. Levy April 21st, 1891. The following is a brief history of her case:

She was taken with *la grippe* about March 1st, 1891; earache occurred on the right side March 22d, followed in a few days by a purulent discharge. Pain continued in the ear and finally extended over the side of the head becoming excruciating. About two weeks before this visit the mastoid region became swollen and red, at which time Dr. Levy had a consultation with another physician, and the result was a Wilde's incision over the mastoid. This did not afford any marked relief. The free use of anodynes had been used to allay pain and procure rest. Chills latterly coming on and a rising temperature with a continuance of the pain, Dr. Levy requested my presence.

I found the patient in bed, temperature 102⅕°, and pulse 100. There was a free purulent discharge from the ear; the mastoid region was red, swollen, and tender, with some invasion of the occipital region, and also the side of the neck. The former incision was not quite healed. We decided to operate next day, and in the meantime applied hot fomentations behind the ear, using anodynes during night when necessary.

April 22d.—Patient passed a very good night and felt much better, though her pulse and temperature were about the same. Ether having been administered, a free incision in the site of the former one was made, two inches in length, reaching the bone. The latter seemed healthy; no pus was encountered; free bleeding followed operation which, however, soon yielded to cotton compresses. We decided to see the effects of this incision before proceeding any further; the wound was dressed in the usual manner.

April 23d.—She passed the best night she had for a long time and felt unusually good. Temperature normal, and pulse 80.

She got along very favorably until the 25th, when she had a chill followed by a temperature of 102°, and a pulse of 120. Pain in the head returned, and she spent a very restless night.

On the morning of the 26th temperature was 103°, and the same evening it arose to 105°, pulse 130. She had a chill towards night; severe pain over side of head; discharge from the ear free. The necessity for opening the mastoid being now urgent, we decided to operate the next morning.

On April 27th, assisted by Dr. Levy, I opened up the previous incision, separated the periosteum from the bone and introduced the retractor. Applying the straight chisel at the usual site, I removed the outer table; diplöe was next encountered and in cutting through this a few drops of pus made their appearance. On reaching the cells they were found rather compact and not disorganized. I gouged through these carefully, going as far as I dared without finding any more pus.—Meeting with pus soon after entering the bone, I expected to find a pus cavity not far off, but so far without success. Loath to quit, I next tried a steel director and worked it on carefully in the direction of the antrum. I was rewarded after a little by noticing some pus in the grove of the instrument; enlarging the opening, about ten drops escaped. I now felt satisfied. I irrigated the cavity with carbolized water, and after drying, insufflated the iodoform and boracic acid mixture into the wound. I next inserted a large silver drainage tube, packed this around with cotton saturated with iodoform ointment, and placed dry cotton and a bandage over all. Temperature the same evening went up to 105°, and so remained during the night; pulse rapid.

April 28th.—Temperature 105°, and during the day 104° and 103°. No pain in

head since operation; only a slight soreness in the wound. Patient was sponged repeatedly, and given quinine for the high temperature by order of Dr. Levy. I saw the patient the same evening. She had a temperature then of 103°, and a pulse of 120, but was feeling fairly comfortable; head free from pain. Dressings were pretty well soaked with blood; a little pus escaped through the tube; ear discharge less. I was able to pass irrigating fluid through wound into middle ear, which trickled out the external meatus showing free communication. She rested well the previous night. Dressed the wound as before.

April 29th.—Had a good night; no chill since; temperature 98½°, and pulse 100. No discharge from ear but free suppuration from wound. Visible improvement in the appearance of the patient; is free from pain.

April 30th.—A good night's rest; relished breakfast; temperature 98½°, pulse 80. Swelling and tenderness over sterno-cleido-mastoid about gone.

May 2nd.—Dressed and sitting up; no pain in the head; quite bright and cheerful; temperature normal, and pulse 76; ear not discharging; wound healing. She was allowed to sit on the porch for a short time to-day.

May 5th.—She has again a very slight purulent discharge from the ear; free discharge from wound; temperature and pulse the same; no pain. Everything went on well until May 22nd, when she was taken with pains in the bowels and back; chill followed by fever, thermometer registering 103°. No pain in the head; wound filling up nicely. Consulting with Dr. Levy, we came to the conclusion her present symptoms were due to an attempt of Nature to restore the menstrual function, which had been suspended since the commencement of her present illness. Accordingly, an emmenagogue was prescribed which had the desired effect, the menstrual flow making its appearance in a day or two after. Previous temperature, pulse, and other favorable indications, were again immediately re-established.

The further progress of the case was uneventful. Discharge from the wound gradually lessened; the cavity in the bone filled with healthy granular tissue closely surrounding a slender drainage tube; ear ceased suppurating and the membrana tympani healed over. The incision over the mastoid closed except that part occupied by the tube.

June 16th.—She is still under supervision. Is entirely free from pain; eats and sleeps well, and goes out either driving or walking daily, and may be considered at least in a very advanced stage of convalescence at the present time, not quite two months since the last operation.

Before closing this paper, I wish briefly to call attention to a few facts: In cases 1, 3 and 4, pain was constant and severe until the mastoid was opened, when followed its complete and permanent cessation. Pus was found in the interior of the bone in every case. The outer table of bone was diseased in cases 1 and 3, but in cases 2 and 4 the surface of the bone seemed perfectly healthy. In case 2 pus was only reached after penetrating the bone over half an inch. In case 4 a few drops of pus escaped after entering the bone a quarter of an inch, and only after proceeding some distance beyond this was the abscess cavity reached. Another point of importance is that in cases 1, 3 and 4 there had been constant and profuse otorrhœa, with no stenosis of the external meatus or other apparent obstruction, and despite this fact mastoiditis with purulent formation resulted. Another point, also of importance, is that an immediate impression was made on the otorrhœa in each case after opening up the mastoid, and its rapid and permanent stoppage with restoration of the drum-head. Again, the disappearance of the large granulations in the meatus in case 3 without any curetting or other radical local method of treatment.

As to the methods employed in opening the mastoid, some remarks on the subject will not be out of place.

The choice lies between the drill, trephine and chisel. The drill and trephine are most in favor with American surgeons, the trephine with the English, and the chisel with the German. I have used both drill and chisel, and most unhesitatingly pronounce in favor of the latter. Dr. Heiman, of Warsaw, in a recent article on the subject, says it is the least dangerous of the three, that the wound remains clean during the opera-

tion, and it can easily be kept under observation.

The retractor which I used in each of the cases reported deserves special mention; it is far superior to anything I have yet tried or seen, and in fact cannot be improved upon. It does away with an extra assistant whose duty it would be to keep the lips of the incision in the soft tissues apart, and it affords a fine view of the underlying bone, facilitating the further steps of the operation.

Denver, Colorado.

CARCINOMA.*

BY J. C. FIELD, M. D.

The subject of carcinoma is one of great interest to humanity at large, and of peculiar interest to the medical savant as well as the busy practioner. This hydra-headed monster appears in so many different guises, that it requires constant exercise of the greatest skill and knowledge to detect the true nature of the apparently harmless growth, or tumor, which so often comes up for our inspection.

During the past twelve or fifteen months I have had the fortune, or rather misfortune, to have quite a number of patients belonging to the malignant family, and in almost every instance the form has been different.

Dr. W. H. Elam, F. R. C. S., says, that notwithstanding the undoubted increase of the prevalence of cancer, which has directed the marked attention of many distinguished observers who have labored to discover the mystery of the disease, nothing new has been recorded.

Cancer is defined by Dr. Joseph Coates as: "A malignant epithelial tumor, taking origin from epithelial cells in a very local centre, no matter how extensively it may appear generalized; primarily it is a local growth, and may be removed with an assurance of no return of the disease, if excision is only performed early enough."

What is the cause of cancer? This is a question that has long vexed the pathologist. Kubasoff says it is due to rod-shaped bacilli of a slightly ovoid form, mostly arranged in pairs, the length amounting to one-fourth the diameter of a red blood corpuscle. "These bacilli can be cultivated, and when inoculated under the skin give rise to cancerous degeneration, commencing in the nearest lymphatic glands, then generalizes, forming genuine cancerous globules. Rabbits and cats die in about two months after being inoculated with these bacilli. All varieties of cancer appear to be caused by the same bacillus."

Kubasoff's assertions, made after very laborious investigations, are certainly entitled to careful consideration, yet we still remain in doubt as to the cause of carcinoma. We are, however, aware of its ordinary microscopic appearances, and upon these, and these alone, is a correct diagnosis based.

There are three varieties of cancer cells, viz.: The spheroidal, the squamous, and the columnar.

The spheroidal or glandular-cell carcinomas, are those which originated in the glandular cells of the racemose glands; for instance, in the epithelial lining of the liver, mammary glands, etc. In this group are included all those varieties of cancer termed "hard," "soft," "medullary," and "encephaloid." The chief difference between these varieties is that the hard or schirrhus cancer, has a large amount of fibrous tissue interwoven in its texture, with cancer cells intervening, while soft cancers have scarcely any fibre at all, but are composed almost exclusively of loose cancer cells.

The squamous or flat-celled carcinomas, include the epitheliomas; the cells are usually large and ragged in appearance, though they vary greatly in size, and present a conglomerated aspect under the microscope, and, instead of containing a single nucleus, usually have two or three. This flattened shape renders them easily recognized, and the manner in which they increase by columns or groups of cells, projecting themselves downward into the tissues, is held by observers to be characteristic of this variety of carcinoma. The skin, the lip, the tongue, in fact all the mucous openings of the body where the epithelium changes its character, seem to be the chosen seat of epithelioma.

Columnar-celled carcinomas are nearly allied to the squamous, and have by many

*Read before the North Texas Medical Association.

writers been included and described as a sub-variety of epithelioma. Tumors of this variety originate in the epithelial lining of the gland cells, and the ducts leading from them. The rectum is the chief seat of this class of cancer, although it sometimes appears in the nose, as well as other exits of the body.

The cancerous tumor is peculiar and pathognomonic in its manner of growth. Cancer cells not only lengthen and subdivide, but project numbers of other cells from the parent cell, each forming its own nucleus, giving rise to the common microscopic appearance of ragged cells; it is rapid cell proliferation which characterizes cancer. The cells being constantly thrown off, are of course projected deeper and deeper into the surrounding tissues, and thus begin the infiltration of the part, a diagnostic sign of all varieties; the manner of its growth should teach the observer its true nature. No cancer is ever confined in a sac or sheath; on the contrary, it infiltrates and appropriates the tissues of the part and becomes homogenous, there being no line of demarcation between the healthy and diseased tissues. No matter what the variety of cancer, it presents the same infiltrated appearance. The neighboring glands being the first to feel the malignant process, it is then continuous, and surgical or medical means are of little avail in checking its progress.

Sarcomas differ from cancer in that they have a sheath, but are none the less malignant. Sarcomas also grow to an enormous size, and are not so choice as cancer in selecting their locality, for while the former may occur on almost any part of the body, the latter usually selects certain localities for which it seems to have an especial affinity; the female breast, the lower lip, the tongue, the larynx, the testes, the rectum, the womb, the liver, and stomach, seem to be the spots most favored, though other parts of the body are not exempt. When we find a suspicious tumor beginning, and seek to diagnose it, we first look to its fixation. All cancerous masses become firmly adherent to the surrounding tissues, and only move as the parts move. This fact being established, we next inquire into the nature of the pain attending the development of the tumor. The shooting lancinating pain, at first occasional, becomes more and more frequent as the development progresses, until suffering at last renders existence a burden, and suicide is not unfrequently resorted to as a means of relief.

The nodular aspect of any tumor is sufficient of itself to attract the attention of the thinking surgeon, yet all cancers are not nodulated, more especially the soft varieties, whose growth is rapid and cell proliferation so enormous, that this peculiar and unusual pathognomonic trait is often absent, or so imperfectly developed as not to attract attention; especially is this true of colloid and encephaloid.

The progress of cancer is very different in the several varieties; the soft cancer runs a much more rapid course, often going through its entire changes within four months, in other instances lasting for years.

The encephaloid grows rapidly and attains a greater size than perhaps any of the other carcinoma's, consequently the drain is greater, and death usually earlier.

The colloid, while it is soft and almost semi-liquid, does not have the malignancy of the encephaloid, and sometimes is a considerable length of time in running its course: After the tissues have been fully infiltrated with the cancer cells and fixation is perfected, the skin is glued to the tumor, becomes red and inflamed, finally breaks down with ulceration—the tumor becoming scooped out, as it were, leaving a shell of cancerous ulcers which continue to discharge peculiar offensive matter, gradually undermining the strength of the patient.

The scirrhus or hard cancer, while having a wide range of difference in activity, is slower in development, and in some instances seems to become quiescent, remaining for months and even years without manifesting any signs of activity, yet surely sooner or later waking up and progressing to fatal termination.

Scirrhus of the breast is perhaps the most common of all the varieties of cancer, and there are few practitioners who have not met with it. It is hard, nodular, and immovable. After a little while it infiltrates and fixes the entire breast, and the breast to the pectoral muscles, making one homogenous mass, with

no definite boundary; the neighboring axillary glands become infected, and a secondary infection may set up therein, showing generalization of the cancerous diathesis. The form of scirrhus just described, is not perhaps the most typical, for it partakes of the columnar-celled, as well as the spheroidal-celled carcinoma. There is a form of scirrhus which instead of growing larger, seems to shrink and drawing in the tissues around, presents a shrivelled and atrophic appearance; the tumor itself is very hard and dense in structure. These withered carcinomas may remain from twelve to twenty years without activity, scarcely increasing at all. The cut surface is concave and presents a dense fibrous appearance, with cancer cells intervening, the whole mass being as hard as cartilage. The epitheliomas, or cancers of the skin as they are called, frequent the face, the tongue, and other parts of the body; where the mucous membrane and skin join; the epithelial structures seem especially liable in these localities to cancerous invasion. The lower lip and tongue are by far the most favored localities, and the irritation to which both parts are subjected render these localities peculiarily susceptible; for instance, the constant friction of the tongue, against a rough tooth, either from caries or being covered by tartar, may set up irritation in the epithelial covering of the tongue and, continued for a long time, thus induce cancerous invasion by the transformation of healthy epithelial cells to squamous cells whereby epithelioma takes place; smokers furnish by far the greatest percentage of cases of cancer of the lower lip. Yet we cannot say that irritation alone is a cause of cancer, for perhaps as many women as men have carious teeth, and it is very rare that a woman is affected with cancer of the tongue or lower lip; it is also true that they do not smoke so much as men. We are, as already remarked, still in the dark as to the cause of carcinoma, but while irritation may not be the sole cause of cancer, it certainly furnishes the fertile soil for the introduction of the disease—of the cancer bacillus, if there is one, and Kubasoff declares he *has* separated the bacillus, though it remains for this supposed discovery to be confirmed.

Epithelioma, like other forms of cancer, grows by rapid cell proliferation, and projects its columns of cells into the tissues in all directions from the point of beginning. The tendency of this form of cancer is to ulcerate very soon; however, those on mucous membranes are attended with cock's-comb, cauliflower, or condylomatous excrescences, which grow with surprising rapidity, and renew themselves as fast as cut off. These forms of cancer are among the most rapid and fatal, and partake of the nature of the spheroidal as well as the squamous.

It is a well known fact that cancer is metamorphic, one variety of cancer verging into another; in fact we frequently see in the same tumor, as in " Paget's disease of the nipple," epithelioma on the surface, and scirrhus in the deeper parts of the breast. In other words, cancer is the same, no matter what its form or the character of its cell; it adapts itself to the locality.

Cancer generalizes after a certain period of activity; generalization is said to have taken place when the lymphatic glands become infected and secondary tumor forms. After generalization all operative interference is worse than useless, as it only hastens the end. Operations after induration and fixation, often serve to hasten generalization and the formation of secondary deposits of cancerous neoplasm. The liver and lungs are the chief seat of the secondary tumor, although the entire digestive tract may be the seat of secondary deposits or growth, especially the colloid. Most cancers are subject to fatty or caseous degenerations which hasten the ulcerative process. We see the hard or scooped-out cancer leaving only a thin rind of indurated cancerous tissues from which an offensive, bloody discharge constantly exudes.

We must now consider what other tumors cancer are most liable to be mistaken for in diagnosis.

The rodent ulcer of the nose is a constant form of cancer, and is now generally recognized as an epithelioma. Papilloma is frequently mistaken for epithelioma, and the fact that many warty growths do assume a malignant character, leads us to suspect a possible development of epithelioma at a later date. Tumors of this class, however, are usually harmless, and should always be

removed. Sarcomas are very much like cancers in malignancy and fatality, but are contained in a capsule, and differ also in the cell arrangement of their internal structure, while cancer has no capsule, but permeates the tissues, infiltrating, and leaving no line of demarcation. Sarcoma also grows to an enormous size, while true cancer never attains, except in rare instances, great bulk. However, cancer and sarcoma occasionally coëxist, and a distinct cell arrangement of both tumors can be seen. The ulcerative gumma of syphilis may also be mistaken for cancer; here, as in all other forms of tumor, the microscope is the means of diagnosis.

Cancer is essentially a disease of middle life, and therefore, in making a diagnosis the age of the patient should always be taken into consideration. While it has been known to occur among young people, it is exceedingly rare. Why it should affect only people of mature years, is a subject that has given rise to a great deal of speculation. Theiersch's theory is, that the overgrowth of epithelium is rather due to a falling off in the resistance of the surrounding part, than to an excessive vital force in the epithelium, *per se*. Dr. Gebhart says that tension of the tissues diminishes with age; and Dr. W. H. Elam declares if by this proposition can be shown that the resistance of the tissues is diminished to the downward penetration of the epithelial cells, under certain conditions, there is here one of the ætiological factors in the pathogenesis of cancer. It has been discovered by Prof. Rommelaere, of Brussels, and emphasized by other observers, that in all malignant tumors the amount of urea excreted gradually diminishes until it is not more than 180 grains in twenty-four hours. From one hundred and twenty experiments, M. Lecanu has arrived at the following conclusions: "The amount of urea excreted by healthy persons in twenty-four hours (the maximum) is 510.23 grains. The mean is 433.13 grains; the minimum is 357.51 grains."

Thus it may be seen that the nitrogenous elements of the body suffer most in cancerous diathesis.

Now, whether this state of the system could be righted by using a diet of animal food, I am not prepared to say; whether or not it would have any effect on the cancerous diathesis at all is a question which must be left to experimentation. Emaciation usually accompanies carcinomas, but is much more marked when the digestive tract is the locality of the disease, more especially the stomach or intestines.

There are two methods of treatment of cancer, viz.: Excision and Caustics. The disease is essentially surgical, and admits of no medical treatment except to palliate the pain and render the patient as comfortable as possible. Many remedies have been vaunted as possessing curative powers, but after trial all have been quietly laid aside for some newer candidate for favor. Excision, after all, is the only means in which we can place much reliance, and unless that is resorted to early, and a large portion of the surrounding tissues removed with the tumor, the operation is not likely to avail. It is now contended by all surgeons, that the cancer infiltration infects the adjacent parts to a much greater extent than the apparent size of the tumor would indicate, therefore an operation to be effective must be very extensive; for instance, an operation in cancer of the breast very often fails to arrest the progress of the disease. Evidently there are left cancer cells enough to develop another center of recurrence, thus proving that if unextensive removal of tissue is made we have no assurance of success. Not only the entire mammary gland, but the pectoral muscle, or that part of it which is adjacent, including the skin which covers the gland, and even the ribs themselves, should be cut out if it is supposed they are infected. All suspicious glands located in the axilla, together with the fatty tissue of the part, should be carefully dissected away. No operation for the removal of cancer can be too extensive.

Caustics have been used with varying success. A great many quack cancer doctors make a caustic of arsenious acid, chloride of zinc, blood root, etc., and apply to all sorts of tumors which they call cancers, and very often succeed in destroying growths which might eventually become malignant. The class of tumors, which these robbers usually cure are fatty, or harmless growths, but such are paraded to the world as true carcinomas, and thus the quacks get a corresponding amount of credit with the laity. Allied to the

caustic treatment, is that by electrolysis, which, while not quite a caustic, is sufficiently strong to check nutrition. The electrical current is flashed through and around the tumor in every direction as long as the patient can bear it, which is generally from fifty to one hundred and fifty times. In this treatment a battery of seventy cells is required, with a force of 105 volts, the current first applied comparatively weak, and gradually increased until the desired intensity is attained, at each sitting increasing the force. The effect of electrolysis is said to cause shrinking by arresting the nutrition of the tumor. It does not entirely disappear, but becomes hard and shrivelled. Now, if this could be accomplished in even a large per centage of cases, the treatment might come into general use, but very little benefit has been derived from it, so like many other remedies, it will seek its level. No method of removal has proved of equal value to the knife, and as Dr. Gross says: "Unless the knife is used unsparingly and the removal extensive, recurrence is almost sure to take place." The statistics of operations show that the danger of recurrence in the breast is greatest. Next comes the tongue, larynx, and the uterus, as only about one-fourth of those operated upon recover. The subject of cancer is so vast that I can only attempt to outline its nature and results without going into detail. Prof. Koch is now claiming his "lymph" will prove a cure for cancer, but this remains to be proved. I only call attention to this, as it has not yet been sufficiently tried to be of value.

Denison, Texas.

CHAULMOOGRA OIL IN VETERINARY PRACTICE.

BY J. W. CHILDS, V. S.

I have tested chaulmoogra oil in veterinary practice, with very satisfactory results, in several cases of chronic rheumatism; also in ill-conditioned wounds, adding 5 per cent. carbolic acid. I think the more chaulmoogra oil is used in either veterinary or general practice, the more it will be appreciated.

Dixon, Ill.

Correspondence.

Editor MEDICAL AGE:

Please permit me to offer a few suggestions on a subject of vital importane to the entire medical profession. It is in regard to the "law to regulate the practice of medicine" now existing in some of the States, and being agitated to a greater or less extent in all States.

Lest the writer be censured for heresy, he wishes to state *most positively*, that he does *not* wish to condone quackery, plead for falacious pathies, or offer any objection whatsoever to any means by which the profession may be emancipated from the detracting influence of quacks and charlatans. What he does desire is to call the attention of the profession to the careful consideration of some points that might, through the zeal of the leaders of the profession, escape notice.

It is a well known fact that no *ex post facto* measure can exist; we can handle the retrospective only as a guide to the future. It is beyond the power of the profession to alter the past. Any person who has been recognized as a practitioner of the healing art, *can* and *will* continue to practice regardless of any State law. This is most conclusively proven in the States having the most rigid law. No law can be constitutional that bars any individual from continuing in an established vocation. It is to the future we must look for help. By raising the standard of medical education, we can debar unqualified quacks from entering the profession. Qualified quacks will always infest the profession until a cure is discovered for moral perversity. State laws are well nigh inert. It is the *exception*, not the *rule*, for quacks to be arrested, and tenfold more rare to secure a conviction when such are brought before the court. They come into any State in the Union and practice in open violation to any existing law. Their printed hand-bills are thrust into the offices of the men whose duty it is to prosecute them; not only that, but they continue to do business unmolested in most cases. State laws disregard and degrade our medical schools. A diploma counts for naught. Let me ask all conscientious mem-

bers of the profession if a faculty of a recognized medical college is not better fitted to ascertain a candidate's fitness to practice medicine than a State Board of Examiners made up of a few regulars, fewer "homœops," one eclectic, and one physio-medical (whatever the last gentleman is, I cannot say, but he constitutes a part of one Board)? The members of such a Board of Examiners are not chosen because of their special ability to determine whether or not a candidate is qualified to practice medicine, but because of their political pull. With such a Board, one-half its members have *got* to make concessions to the other half, and thus compromise the most vital points. The writer would like it if someone would prove any other condition of affairs.

Something has recently been said through the journals about Illinois being one of the banner states in inaugurating reform in the ranks of the medical profession. Her Legislature grants a State Board of Health the privilege of deciding whether or not an applicant is eligible to practice medicine, and then ties the hands of the Board by fixing a standard by which it must judge. The same Legislature grants to a School of Christian Science, in the city of Chicago, a charter, permitting said school to graduate its students in this modern blasphemy and send them out to gull the public. Suppose the State Board of Health decides that these persons are not eligible to practice, what then? The courts acting as interpreters of the laws will will sit on the State Board of Health, and declare one law as valid as another.

The writer would suggest that all delegates to the American Medical Association be instructed to use their influence to have the Association, as representing the profession in America, introduce a bill into Congress which shall fix the standard of medical education and require all medical colleges to conform thereto or close their doors. Then let a diploma be the exponent of a man's eligibility to practice, and let him be permitted to practice anywhere under the Stars and Stripes he may wish. Our medical colleges, and not State Boards, are supposed to manufacture doctors.

E. H. SMITH, M. D.

Santa Clara, Cal.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

INJECTIONS OF ANTISEPTICS IN PHTHISIS.

Among the more notable methods of treating phthisis which have been exploited, perhaps none are of more interest than that now known as the "Roussel Treatment."

Dr. Roussel's theory is that all the symptoms of phthisis are the efforts of Nature to throw off the microbe which is destroying the system. The suppurations, expectorations, are Nature's attempts to get rid of the invading bacilli. The high temperature burns the leucomaines, etc., that circulate in the blood; the abundant night-sweats, the diarrhœa, and surcharged urine, are all so many modes of elimination. They are the arms which Nature has given the human body to expel those animal particles which have been rendered injurious by the invading microbe. Therefore Dr. Roussel maintains that true science rests in the use of such therapeutics as will attack only the microbe, and that we ought not to try to diminish the power of those weapons which our organism employs in self-defence. Rather should we seek to increase the vitality of the subject who serves as a battle field between human life and the life of the microbes. But remedies swallowed injure and disturb the organs of digestion, and therefore weaken the patient, while they altogether fail to reach the lungs, where the microbes are located. General hygiene, constant ventilation, plenty of sunlight, and sanitary knitted woollen clothing, are all strongly advocated by Dr. Roussel. When these are secured, a general improvement in the condition of patient is often noticed, and it is the good hygiene rather than the drugs given that secures such amelioration. To prove the efficacy of a drug, the improve-

ment should take place when no alterations are made in the patient's surroundings and mode of life. This is what Dr. Roussel professes to have accomplished by conveying through the medium of the blood, direct to the lungs, antiseptics fatal to the life of the bacillus of Koch.

The method employed is simple, the practice easy, but the indications given must be rigorously observed, otherwise unpleasant accidents may result. Eucalyptol is Dr. Roussel's favorite antiseptic, which he uses in the proportion of twenty per cent. for his hypodermatic injections. But if this or other medicaments are diluted in some substances very grave accidents may result. Dr. Roussel employs pure sterilized olive oil, as this is a substance not foreign to the usual nutrition of the human body. It is easily saponified and assimilated by the organism. This is effected as readily by the capillaries of the skin as by the digestive tube. But oils of a mineral base, such as petroleum, etc., are rejected as being artificial, irregular, and even caustic. The volatile essence contained in the sterilized olive oil travels with the blood till it reaches the lungs, and there, being placed in contact with the air the patient breathes, becomes diluted, evaporates, and escapes with the breath.

Thus the patient's breath smells of eucalyptol very shortly after the injection, and subsequently both sweat and urine have the same odor. When thymol is used, the odor is very pleasant, and several patients have been surprised and pleased to find how sweetly they were perfumed by this medical treatment.

Naturally, the injections have to be taken for several months, as the perfumed effluvia must be absorbed; must, in fact, embalm the entire body, to preserve it, as that of a mummy, against the destructive microbes. The friends or nurse of the patient can easily be taught how to perform the operation. This, done systematically and persistently, will, Dr. Roussel maintains, kill the bacillus of Koch, especially if it be a case, not of inherited, but of contracted phthisis.

Supplementing the work of Dr. Roussel comes that of Dr. Henri Huchard, who (Rev. Gen. de Clin. et de Ther., Aug. 19th, 1891) states that he has used hypodermatic injection of camphorated oil at the Hôpital Bichât for some time past in the treatment of cardiac affections, adynamic conditions, and acute and chronic pulmonary diseases, especially phthisis. His report deals solely with cases of the last-mentioned malady. The following formula was first employed: ℞ Pure sterilized olive oil, 100. grammes; camphor, 10. grammes; 0.10 gramme of this preparation being injected each time. As no ill effects were observed, the amount of camphor was increased to 25. grammes, and the injection given every two days, daily, or twice a day, according to circumstances, deep under the skin. After trying this method for some time, the preparation was somewhat modified by the addition of 2 per cent. of guaiacol and 1 per cent. of iodoform; but as the use of this mixture caused considerable pain, and the beneficial effects of the added substances was "hypothetical," they were after a time abandoned.

The number of cases of phthisis in which the method was tried was 27. Neither pain or the formation of abscess followed the injection of the plain camphorated oil. The first effect produced was a slight feeling of intoxication, which was speedily followed by drowsiness. Patients who had habitually suffered from insomnia obtained six to eight hours of sleep as long as the injections were continued. In three-fourths of the whole number night sweats ceased; in one-half appetite returned, and the digestion was improved; in no instance did the treatment cause any disturbance of the digestive function. In six cases the effect on the general condition was extremely marked, notably in one patient with advanced disease of both lungs, who was almost in the last degree of weakness. In ten or twelve cases the temperature was reduced, and in eight, weight was gained to the extent of from two to four pounds in five weeks. No particular result was noticed as regards either expectoration or physical signs, but M. Huchard points out that nothing very definite can be said on these heads until further time has elapsed. The injections are well borne in the dose of 0.10 gramme; the larger dose (0.25 gramme) is also well borne even when two injections a day are given for three or four days; on the fourth day, or thereabouts, patients begin to complain of a taste of cam-

phor in the mouth, and are also troubled with eructations having the same flavor. The good effect of the injections does not as a rule persist after they are discontinued, but in some cases a repetition of the injections once a week gave satisfactory results. Three patients died after from six to twelve days of treatment, but they were all in the last stage of consumption when admitted. Dr. Huchard does not present his treatment as a remedy for phthisis, but simply as a powerful general tonic and a ready means of relieving certain troublesome symptoms. The chief use of the camphorated oil is, he thinks, that it is an efficient and in every way unobjectionable substitute for morphine. Further, if it does not attack the bacilli directly, it produces very favorable modifications in the tuberculous soil.

THE DISINFECTION OF EXCRETA.

In these modern days when prevention of disease is considered the Ultima Thule of the physician's ambition, sound views on disinfection are a *sine qua non* to the physician as well as to the sanitarian.

Geo. M. Sternberg, M. D., whose work in connection with the investigation of the practical value of various disinfectants is well known, read a paper before the Section on State Medicine of the American Medical Association, in which he emphasizes the necessity pointed out by the Committee on Disinfectants of the American Public Health Association, of recognizing the distinction between deodorizers, antiseptics, and disinfectants. The last of these three classes is alone germicidal.

Dr. Sternberg, after defining the rôle of such agents as sulphate of iron, carbolic acid, creolin, and chloride of zinc, gives preference to chloride of lime properly employed, of which he says:

In the writer's experiments a saturated aqueous solution of calcium oxide failed to kill typhoid bacilli; but when suspended in water in the proportion of 1 to 40 by weight, this bacillus was killed at the end of two hours. Anthrax spores were not killed in the same time by a lime wash containing 20 per cent. by weight of pure calcium oxide. According to Kitisato the typhoid bacillus and the cholera spirillum in bouillon cultures, are destroyed by the addition of 0.1 per cent. of calcium oxide. Pfuhl experimented upon sterilized fæces to which pure cultures of the typhoid bacillus, or cholera spirillum, were added. The liquid discharges of patients with typhoid fever or diarrhœa were used for the purpose. He found that sterilization was effected at the end of two hours by adding fragments of calcium hydrate in the proportion of 6 per cent., and that three per cent. was effective in six hours. When a milk of lime was used which could be thoroughly mixed with the dejecta the result was still more favorable. A standard preparation of milk of lime containing 20 per cent. of calcium hydrate killed the typhoid bacillus and the cholera spirillum in one hour, when added to liquid fæces in the proportion of 2 per cent.

The experiments with this agent show, that time is an important factor, and that much longer exposures as well as stronger solutions are required to destroy pathogenic bacteria than is the case with chloride of lime. For this reason we give the last named agent the preference for the disinfection of excreta in the sick-room. But in latrines the time required to accomplish disinfection is of less importance, and *we are disposed to give recently burned quicklime the first place for the disinfection of excreta in privy vaults, or on the surface of the ground.* It may be applied in the form of milk of lime, prepared by adding gradually eight parts, by weight, of water to one part of calcium hydrate. This must be freshly prepared, or protected from the air to prevent the formation of the inactive carbonate of lime.

According to Behring, lime has about the same germicide value as the other caustic alkalies, and destroys the cholera spirillum and the bacillus of typhoid fever, of diphtheria, and of glanders, after several hours exposure, in the proportion of 50 c. c. *normal-bauge* per litre. Wood ashes, or lye of the same alkaline strength, may therefore be substituted for quicklime.

Finally, it must not be forgotten that we have a ready means of disinfecting excreta in the sick-room, or its vicinity, by the application of heat. Exact experiments made by the writer and others show that the thermal death-point of the following pathogenic bacteria, and of the kinds of virus mentioned is below 60° C. (140° F.): Spirillum of cholera, bacillus of anthrax, bacillus of typhoid fever, bacillus of diphtheria, bacillus of glanders, diplococcus of pneumonia, streptococcus of erysipelas, staphylococcus of pus, micrococcus of gonorrhœa, vaccine virus, sheep-pox

virus. Ten minutes exposure to the temperature mentioned may be relied upon for the disinfection of material containing any of these pathogenic organisms—except the anthrax bacillus when in the stage of spore formation. The use, therefore, *of boiling water in the proportion of three or four parts to one part of the material to be disinfected*, may be safely recommended for such material. Or better still, a ten-per-cent. solution of sulphate of iron or of chloride of zinc, at the boiling point, may be used in the same way (three parts to one). This will have a higher boiling point than water, and will serve at the same time as a deodorant. During an epidemic of cholera or typhoid fever such a solution might be kept boiling in a proper receptacle in the vicinity of the hospital wards containing patients, and would serve to conveniently, promptly, and cheaply disinfect all excreta.

IDENTIFICATION BY FINGER TIPS.

The Nineteenth Century, for August, contains a curious and highly interesting contribution on "Identification by Finger Tips," by Mr. Francis Galton. If Mr. Galton's plausible reasoning is to be credited, this means of identification may be of great importance in medico-legal cases in which the identity of criminals must be ascertained, as in trials for murder. It is suggested also that by this means deserters from the army and navy could be convicted.

To establish the feasibility and utility of this method, the following points are indispensable: First, it must be shown that the markings on the finger-tips follow definite patterns that are capable of minutely accurate description. Then there must be satisfactory evidence that the markings are persistent during the life of the individual. Next, some method of precise comparison between different fingers must be devised. Lastly, some simple plan of taking and preserving finger markings must be suggested. On all these points Mr. Galton has much that is ingenious to say, and he entertains no doubt that each and every difficulty may be successfully surmounted.

Everything obviously turns upon the nature, persistence, and recognisability of the patterns of the little ridges on the finger-tips. These patterns "are formed by the convolutions of delicate ridges, each of which is seen to be studded with small holes, which are the open mouths of ducts issuing from the perspiratory glands. As a rule, the issues of all ducts are surrounded by slight elevations of the skin, but those on the inner surface of the hands and feet have the peculiarity of not being contained in separate elevations like craters in elevated cones, but of occurring along ridges, like the craters which stud the crest of some long mountain chain." The ridges are based upon the subcutaneous papillæ, and serve to render more sensitive the sense of touch. The peculiarities of the patterns which these ridges form on the finger-tips are due to the finger-nail, which "disturbs their parallelism and squeezes them downwards at either side of the finger." Thus the ridges nearest the tip are the most arched, those that follow are less so, and the arching insensibly disappears about the level of the joint. When a print of these markings is obtained and scrutinised under a lens, it is found "to abound in minute peculiarities, due to the branchings of existing ridges, and to the abrupt interpolations of new ones. It is in these minutiæ, as well as in the general character of the pattern, and *not* in the measured diameters of its outline, in which the extraordinary persistence resides. The pattern grows together with the finger, and its proportions vary with fatness or leanness, while both are further deformed by usage, gout, and age, which make the hands of old people less sightly than those of young ones." Evidence is given of the persistence of even the most trifling peculiarities. In the case of eight pairs of impressions there were reckoned 296 points of comparison, and every one of them was found to hold good—*i. e.*, each peculiarity in the markings on the patterns persisted in spite of the growth of the part or its change in shape from disease, or other cause. In only one single case was it found "that the forked portion of one ridge in a child of two years and three-quarters had become fused by the time he was a boy of fifteen."

Some principle of arrangement and classification of these finger patterns is obviously required. Mr. Galton finds that every pattern can be easily sorted under one of three fundamental heads—viz., primaries, whorls, and loops. Each fundamental variety is

further subdivided into two, according to the direction of its slope, either from below upwards and inwards, or (less frequently) from below upwards and outwards.

For the purpose of registering these finger patterns, Mr. Galton has devised a little apparatus, "consisting of a little box three and a half inches square by seven and a half long, containing a slip of stout glass, a small and good printer's roller, a collapsible tube filled with very fluid printer's ink, a book of blank paper, and a phial of benzole and some rags to clean the fingers. A drop of ink is squeezed out of the tube on to the glass, and spread very evenly and very thinly over it by the roller. Then the fingers are lightly pressed, first on the inked surface of the glass, and afterwards on smooth paper; finally, they are cleaned."

Mr. Galton concludes with the suggestion that, should finger printing come to be adopted as a useful custom, the carrying out of the process might be conveniently entrusted to the photographers as a body. "They are a class of men who are naturally gifted with dexterity of fingers, mechanical aptitude, versatility, and some literary taste. So far as they are engaged in portraiture, they already occupy themselves in supplying one means of identification; therefore the pursuit of another means of identification would in some sense lie within their present province."

AMERICAN PHYSICIANS IN LITERATURE.

Under this title R. R. Bunting, M.D., in an address delivered before the Alumni Association of Jefferson Medical College, and published in the Philadelphia Medical Times of Sept. 5th, very clearly shows the fallacy of the views so generally entertained that American physicians are not as cultured as those of other countries.

The author of this scholarly review shows that his researches have been most thorough, as he has gathered a most interesting record of the literary achievements of American physicians who have cultivated literature as a recreation.

We regret that we cannot give here a more complete *resumè* of the names of these illuminati and their productions, together with the quotations from their literary work which Dr. Bunting so appropriately cites. It is to be hoped that this interesting story of literary achievement may be reproduced in more permanent form, for certainly all physicians would wish to add such a book to their library.

As a foretaste of the repast Dr. Bunting has spread, we may quote two of the gems that help illuminate this literary banquet.

A DECANTER OF MADEIRA AGED EIGHTY-SIX, TO GEORGE BANCROFT, AGED EIGHTY-SIX, GREETING.

Good master, you and I were born
In "tea-cup days" of hoop and hood,
And when the silver queue hung down,
And toasts were drunk, and wine was good,

When kin of mine (a jolly brood)
From sideboard looked, and knew full well
What courage they had given the beau,
How generous made the blushing belle.

Ah me! What gossip could I prate
Of days when doors were locked at dinners!
Believe me, I have kissed the lips
Of many pretty saints and sinners.

Lip service I have done, alack!
I don't repent; but come what may,
What ready lips, sir, I have kissed,
Be sure at least I shall not say.

Two honest gentlemen are we—
I Demi-John, whole George are you;
When Nature grew us one in years,
She meant to make a generous brew.

She made me store, for festal hours,
The sun our south-side vineyard knew;
To sterner tasks she set your life—
To statesman, writer, scholar, grew.

Years eighty-six have come and gone;
At last we meet—your health to-night
Take from this board of friendly hearts,
The memory of a proud delight.

The days that went have made you wise;
There's wisdom in my rare bouquet;
I'm rather paler than I was,
And, on my soul, you're growing gray!

I like to think when toper Time
Has drained the last of me and you,
Some here shall say: "They both were good—
The wine we drank, the men we knew."

—*Dr. S. Weir Mitchell.*

A DRINKING SONG.

Fill high the glass,
And let it pass
Harmonious with the sun.
We spend our days
In his bright rays,
And thus the wine should run.

Aye, let it run,
And, like the sun,
Light, life and joy impart;
It warms the soul,
The generous bowl,
And cheers the weary heart.

Hail, ruby wine!
Thou boon divine
Whose praise is hymned by heaven:
Let bumpers fair
Our thanks declare
For bliss so kindly given.

—*Dr. Littell.*

PHYSICIANS' CLUBS.

We think the medical profession of Chicago have struck a very happy vein in establishing "The Practitioners' Club," the objects of which are a monthly gathering, a good dinner, reasonable hours, nominal expense, good fellowship, light discussions, no officers, a closer professional feeling.

The problem of bringing representative physicians together *en masse* for the discussion of medical questions has always remained an unsolved one, for, unless the occasion be an exceptional one, only a few ordinarily put in an appearance, and the discussions are for the most part stale and unprofitable.

The idea of combining social refreshment with informal comment on current topics establishes at once a plane on which many can meet to mutual profit and pleasure.

The first meeting of the Practitioners' Club of Chicago for organization, was held at the Palmer House, August 31st, and in the words of the editor of the local journal, the enjoyment and enthusiasm of the occasion was an omen of assured success.

By a new process of classification, this might be called the age of clubs, and we predict success for this newly established one, and commend its purposes to all clubable doctors in every town.

To quote the inspiring words of our Chicago contemporary, the editor of the Journal of the American Medical Association:

Such comings together of men of kindred minds and pursuits, with laudable purposes, are always fraught with good. We are sure that every town or city with more than a dozen doctors in it should have such a club as this. In such meetings may be discussed a variety of themes which are not usually taken up in more formal society meetings, such as the relations of the medical profession to the public, and of the public to the medical profession, the furtherance of all interests pertaining to the common welfare both of the people and of the profession. At such meetings, with agreeable surroundings and face to face, united action, harmoniously brought about, is much more easily and better obtained than when acting separately, although for the same purpose. Besides, we all think better and more kindly of each other for having once a month sat with our nether limbs under the same mahogany.

The members of the medical profession in every city of a hundred thousand people should have their own home. They may be only able to rent a humble dwelling for such a purpose, but by all means rent until able to own, and there have a library, a reading and common sitting room, a dining room and kitchen. A fraternal spirit and union of hearts will there be knit together. Professional homes are promoters of peace and good-will, and from them are sure to spring the benevolent sentiment that encourages the strong to care for and not step aside to crush out the life of the weak and perhaps unfortunate. In the cultivation of this spirit and sentiment strong men are made stronger, and their lives more loveable. Their angular points are smoothed down until they are so polished as to, on all occasions, reflect the nobleness of soul that is within them, while the weak but deserving are held up and encouraged in practical ways.

THE PREVENTION OF MORPHINISM.

In a paper on this topic, read before the American Medical Association, May 6th, and published in the Dietetic Gazette, Dr. J. B. Mattison emphasizes the virtues of codeine and narceine as soporifics.

Starting with the premise that pain and insomnia, with the use and abuse of morphia for their relief, are the leading causes of morphinism, he commends the general employment of codeine and narceine when anodynes and hypnotics are indicated, instead of morphia.

He defines the province of codeine to be relief of any and every pain, and especially adapted, by virtue of its non-tolerant power, to neuralgic disorders which stand so largely in genetic relation to the abuse of morphine.

He considers codeine, even in incurable painful conditions, better than morphia, bringing ease without unpleasant gastric and other sequelæ of the latter drug.

The hypnotic action of codeine is also distinct and decided, and may be quite apart from any analgesic need. It is a reliable soporific, though sometimes acting more slowly, yet without the dullness or headache often sequeling morphine.

A great gain in using codeine *vice* morphine as an anodyne and hypnotic is, that it lacks that inexplicable influence of the latter in making itself felt apart from relief of pain, and so creating a morbid condition, a so-called "craving" that will not be denied.

Another point in favor of codeine is the non-need of increasing the dose on long usage. The reverse so often obtains with morphia that it marks one of the distressing features attending its habitual use. An initial dose of one-half grain by mouth, or one-quarter to one-half grain by skin, is safe, and may be repeated and increased as required.

Narceine, though so little used, is a soporific of value. It is not an anodyne. Failure will result if pain be present. The dose should be double that of morphia. The hydrochlorate admits of hypodermatic use.

BICHLORIDE OF GOLD TREATMENT FOR INEBRIETY.

The so-called bichloride of gold treatment of inebriety, for which so much has been claimed, and to which the newspaper press has given such prominence, proves to be a rank humbug. Bichloride of gold, though a chemical possibility, is impossible therepeutically, as the preparation reduces and becomes inert the moment the chemical bichloride transformation is effected.

It is stated that the remedies employed by the manager of the institution, which has been chiefly identified with this treatment at Dwight, Illinois, are the hypodermatic use of cocaine and administration by mouth of the so-called bichloride of gold, which a recent analysis reveals to be a weak solution of aloin in water combined with comp. tr. cinchona. The only gold used in the treatment is that supplied by the dupes in the form of fees.

The favorable effects of this treatment are in part due to the action of cocaine, but chiefly to the mental effect on the patients who, emotionally stimulated by faith in the promised cure, are enabled to gain temporary control of their habit. The lay and religious press have given the chief quack and his humbug an amount of free advertising beyond computation.

The Secretary of the State Board of Health of Illinois is authority for the statement that the manager of this institution at Dwight was refused a license to practice medicine in Illinois.

FRAUDULENT MILK.

We have heard much of adulterated milk and its prevention, but Health Boards must now turn their attention to an attempt which has been made to market an imitation of milk, made by a formula, an analysis of which has been recently made with the result of disclosing this fraudulent attempt at imposition.

We have received from the Secretary of the Michigan State Board of Health the following facts regarding this bogus milk:

This fluid was sold for two dollars per gallon by the men trying to work up a market for it at Kalamazoo, who claimed that with a bottle of this fluid the milk dealer could add water equal in quantity to the milk, and thus double his sales.

The analysis which accompanies the Secretary's information is as follows:

UNIVERSITY OF MICHIGAN,
LABORATORY OF HYGIENE,
ANN ARBOR, September 19th, 1891.

DR. HENRY B. BAKER, Secretary State Board of Health:

The examination of sample No. 1, purporting to contain all the nutriment of milk, etc., is completed, and it is scarcely necessary to say that such a claim is entirely preposterous and shows at once upon its face its fraudulent character. On analysis it was found to contain:

Total solids		44.88 per cent.
Common salt	13.08	
Invert sugar (glucose)	14.62	
Cane sugar	16.36	
	44.06	
Salicylic acid (present but not determined)		44.88 per cent.

The solution is probably covered by caramel.

Sample No. 2 has not arrived yet, but will test it as you desire when it does.

Very truly yours, F. G. NOVY.

Book Notices.

PULMONARY CONSUMPTION, A NERVOUS DISEASE. By Thomas J. Mays, M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic and College for Graduates in Medicine, Visiting Physician to Rush Hospital for Consumptives of Philadelphia. From the Press of Geo. S. Davis, Detroit, Physicians' Leisure Library. Pp. 185. Price: cloth, 50 cts.; paper, 25 cts.

This book, just from the press, is an oasis in the desert of pulmonary therapeutics. It is certainly refreshing, after wandering among the myths of speculation with nothing more tangible left to cling to than exploded specifics for tuberculosis, to read the conclusions reached by Dr. Mays, as the result of indisputable premises, as to lines of treatment based not on theory but on solid facts which experience has amply demonstrated. Dr. Mays' therapeutics of pulmonary consumption may be tersely stated in three words—*rest, out door air, hypernutrition.*

In commending these agencies, the author does not fail to point out the indications for medicinal treatment, and the proper employment of drugs, but he pins his faith to the three mentioned beneficent methods which are more fruitful of good than the so-called specifics.

We can not forbear quoting a few lines from Dr. Mays' presentation of his own views. He says:

The cardinal principle on which this work rests is, that pulmonary consumption is not a local but a constitutional disease; that it consists in an exhausted state of the nervous system in general, and of the pulmonary nerves in particular. Exhaustion, therefore, being the fundamental morbid condition with which we have to deal therapeutically, the question arises as to the best manner of combating this evil. * * * The remedial indications are, therefore, toward a fortification of the constitutional resistance. This can only be accomplished by economizing the bodily forces—that is by diminishing the outgo and increasing the income, and physiological rest is one of the most valuable adjuvants in securing this end. * * * Whatever else is done in the interest of a consumptive, it still remains for food to perform the principal rôle in restoring his health. Food is the medium through which the physiological capital—the material to build up the tissues, the force with which these are kept in running order—is increased; hence, nothing taxes the ingenuity of the practitioner more, or demonstrates his ability to better advantage, than his success in devising ways and means whereby his patient is led to partake of a sufficient amount of nourishment.

These may be regarded as trite sentiments, but, worthy reader, they will merit reconsideration in the light that is thrown on them by Dr. Mays' detailed suggestions as to ways and means of utilizing them to best advantage.

As to the nervous origin of pulmonary consumption, the author recapitulates his views as follows:

1. That in all probability every disease possesses its attendant micro-organism.

2. That the natural genesis of a disease is altogether different from its artificial transplantation.

3. That the inoculability of a disease is not the least evidence of its practical contagiousness.

4. That the theory of the contagiousness of pulmonary consumption rests almost entirely on suspicions, and on laboratory experiments which are unsupported by clinical facts.

5. That tubercle is not in itself a menace to life.

6. That there is no correspondence between the number of those who are exposed to the bacilli and those who contract pulmonary consumption.

7. That all therapeutic and hygienic measures which have been based solely on the bacillary origin of consumption are disastrous failures.

8. That consumption is inherited in about fifty per cent. of all the cases.

9. That a hereditary disease is not contagious unless it affects the nervous system.

10. That catarrhal phthisis may be produced on animals by section of the vagi.

11. That pulmonary consumption is a disease in which the vagi are primarily involved.

12. That alcohol and syphilis produce pulmonary consumption by inducing vagus disease.

13. That in all probability arsenic, lead, mercury, brass, and other substances, produce consumption by reason of their specific action on the nervous system.

14. That diabetes, beri-beri, leprosy, and probably lupus and pellagra, are intimately associated with pulmonary consumption because, fundamentally, the evidence appears to show that they are nervous diseases.

15. That the neurotic theory of pulmonary consumption shows such a rational connection between cause and effect as no other theory does, and explains why nervous or mental shock, whooping-cough, alcoholism, syphilis, arsenic, lead, mercury, etc., produce this disease; why the latter is associated with insanity, with disease of the brain, spinal cord, and peripheral nerves, with diabetes, beri-

beri, leprosy, pellagra, etc., why it is inherited; why the youngest and the oldest of a family are most prone to it; why segregation or quarantining is useless; and why the hypophosphites, cod-liver oil, electricity, and the maintenance of the nutrition tone, are such invaluable aids in the treatment of this disease.

THE PRACTITIONER'S VADE MECUM. A Practical Work on New Materia Medica, Modern Therapeutics (Physiological, Medical, and Clinical), and Recent Treatment of Diseases met with in all branches of Medical Practice. Including various other subjects connected with the Practice of Medicine. By Edaljee Cawasjee Tukina (Appu), L. M. & S.. First edition. Printed at the Imperial Press, Kalkadevi Road, Bombay, India. 1891. Pages 1376. Price 8 rupees ($4).

This elaborate compilation of material of the greatest value is the most comprehensive, complete, and best edited and arranged collection of facts, modern materia medica and therapeutics, official and unofficial remedies, that we have yet met with.

It is aphabetically arranged, copiously indexed, and divided into three parts.

Part I contains the botanical origin, distribution, characters, physiological and therapeutical properties, practical uses, clinical observations and reports from hospital and private practice, preparations and doses of all new (Indian, European, and American) drugs and medications, official and non-official.

New therapeutics and more recent practical uses and clinical reports of many important and commonly used old drugs.

Therapeutics and doses of rare alkaloids, glucosides, chemicals, etc., including the active principles of many important drugs.

List of maximum doses of new remedies.

Each new drug is described in the following order: Its medicinal name; its synonyms in all languages; its part employed in medicine; its natural order; its habitat and distribution; characters and description of both the plant and its part employed in medicine; tests, if the medication be an inorganic substance; its physiological actions; its therapeutical actions, with practical and clinical uses; its contra-indications; its toxicology; its clinical observations and reports from hospital and private practice in Europe, America and Asia, etc.; its preparations, modes of administration, and doses.

Each old drug is described as regards all its recent practical therapeutical uses, with its clinical indications and reports.

A complete extra table of doses, single, daily and maximum, of all new remedies, has been given at the end of the Part.

Part II contains: Therapeutical classification of all the new and old European, American, and many well-known Indian drugs, both official and non-official; treatment (medicinal and dietetic) of all the diseases and disease symptoms; hypodermatic medication; incompatibles; management and treatment of disorders peculiar to infants and children; obstetrics and gynæcology; ophthalmology; otology; toxicology.

Each disease is named and put in an alphabetical order. Then several practical and select prescriptions are given in order of their specific effects, the most effective one being given first and marked as (sp.) The prescriptions are not only European and American, but in some cases are Indian, and, furthermore, in some places prescriptions or remedial means used in different countries have also been given. Following the prescriptions is also a complete tabular alphabetical list of all the drugs or remedies, old as well as new, European, American, and Indian, that are useful in the treatment of said disease or diseased symptom. (Doses of those remedies not described in Part I are also given here). Besides the medicinal treatment, the dietetic treatment of most diseases has been given.

Part III contains: Practical and Clinical Notes relating to Pharmacology, Therapeutics, Diagnosis, Prognosis, Important Diseases and their treatment, Hygiene, Medical Maxims, and other subjects too numerous to be mentioned.

The book is arranged throughout in an alphabetical order, with a copious well-arranged index for each part separately. More attention has been paid, throughout the first part, to the portion of therapeutics.

The work will no doubt be an indispensable one for ready reference and practical use for every medical practitioner. It may be obtained of the printers, or of the author, Eduljee Cawasjee Tukina (Appu), L. M. & S., Marwari Bazar, Mumbadevi, Bombay, India.

TABLES FOR DOCTOR AND DRUGGIST. Comprising Tables of Solubilities, Reactions and Incompatibles, Doses and Uses of Medicines, Specific Gravity, Poisons and Antidotes. Compiled by Eli H. Long, M.D., Professor of Materia Medica, Buffalo College of Pharmacy; Adjunct Professor of Materia Medica, Medical Department, University of Buffalo. Geo. S. Davis, Publisher, Detroit, Mich. Price, $2.00.

To students, drug clerks, and the accomplished practitioners of both medicine and pharmacy, this book is a boon. It affords, in most convenient, condensed, and available form, information that is invaluable to all who prescribe or dispense medicines.

The present age demands of the doctor and druggist that they shall prescribe and dispense drugs not in nauseous, incompatible mixtures, but in palatable form, with due regard for the æsthetic feature of their art, that the compound may offend neither the sense of taste or sight.

To do this acceptably means success in the practice of either art, and demands a fundamental and constantly fresh knowledge of the facts which Dr. Long has so ably compiled and arranged.

One day's use of this work will, we believe, repay doctors and druggists for its price; and students will find in it, in predigested and readily assimilable form, pabulum which they might search many text books for in vain.

The object of this compilation is to bring into convenient form for ready reference, information that is wanted daily by the physician and pharmacist.

Solubilities combines in one what is usually found in two separate tables, and the liberty is taken of interposing any collateral facts that will add to the practical value of the list.

The table of Reactions and Incompatibles constitutes the distinctive feature of the work. It is not intended to be a technical guide for the chemist, but is arranged rather with a view to the practical needs of the practitioner. In its preparation it was found difficult to decide upon a standard of reliability for the admission of stated instances of incompatibility, for is is evident that verificaion of all the reactions given would be impossible. Certain reactions depend upon precise conditions, and in experiment the exact conditions might not be attainable, although they might be present incidentally at other times. The rule has been followed, however, of including no reactions that are not recognized by good authority, or that are chemically improbable. In the case of the complex organic drugs, little has been attempted beyond enumeration of their principal constituents as furnishing a guide to their probable reactions.

The Table of Doses furnishes a very complete list of medicinal substances now employed, with their doses and principal uses.

The Table of Specific Gravities includes not only all official but many unofficial liquids.

The Table of Poisons is designed to occupy a place between the smaller lists of poisons included as a matter of course in most dose-books and physicians' visiting lists, and the large special works on toxicology. It is accordingly made to include symptoms of poisoning, toxic doses, and treatment in detail, with frequent explanatory notes.

In the preparation of the work, the compiler has had the valuable assistance of John A. Miller, Ph. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Niagara University, who reviewed critically the Table of Reactions and Incompatibles and the Table of Poisons and Antidotes.

Many valuable suggestions have also been received fron Prof. Oscar Oldberg, of Chicago, and from Prof. Willis G. Gregory, of Buffalo, and their counsel, has been profitably employed during the prosecution of the work.

WOOD'S MEDICAL AND SURGICAL MONOGRAPHS. Vol. ii, No. 2. August, 1891. "Modern Abdominal Surgery," by Sir T. Spencer Wells; "Subjective Noises in the Head and Ears, Their Ætiology, Diagnosis and Treatment," by H. NacNaughton Jones, M. D.; "Notes on Surgery for Nurses," by Joseph Bell, M. D.; "Surgical Treatment of Typhlitis," by Frederick Tréves, F. R. C. S.

Spencer Wells briefly presents his views on Anæsthesia, Drainage, Uterine Tumors, Battey's Operation for Oöphorectomy, Cæsarean Section and Porro's Operation, Liver and Gall Bladder, Operative Surgery of the Kidney, and Enterectomy.

H. MacNaughton Jones takes up at con-

siderable length a rather obscure subject and elaborates it with some degree of lucidity. He considers first Causation, and then, seriatim, Diagnosis, Examination of a Case of Tinnitus, Differential Diagnosis, Prognoses, Treatment, Some Anatomical Points Bearing on Reflexes of the Trigeminus, Aural Electro-Therapeutics and other Therapeutical Remedies.

Bell's Notes on Surgery, while designed for nurses, might be read with profit by many students and practitioners, who should be informed as to the measures to be resorted to in emergency cases so as to give detailed instructions to nurses.

The Surgical Treatment of Typhlitis by Frederick Tréves comprises a preliminary consideration of the anatomy of the cœcum and appendix, and a consideration of the detailed management of typhlitis.

SPRAINS, THEIR CONSEQUENCE AND TREATMENT. By C. W. Moullin, M. A., M. D., Oxon., F. R. C. S. Eng. Wm. Wood & Co., New York, Publishers. Pages 221. 1891.

While the major surgical operations may command the applause of listening thousands, it is the skillful handling of minor ones by the average practitioner in general practice that helps build up his practice and establishes for him a growing and appreciative patronage. To remove a facial blemish, to abort a boil, to successfully and painlessly restore to its normal condition a toe with an ingrown nail, may seem homely duties, but how they are done may make the difference between success and failure.

But to return to our mutton, or to apply our moralizing—the author of Sprains and their Consequences truly says that few injuries are treated with so little consideration as sprains. It is impossible to overlook wounds. Fractures it is understood require rest and care; but sprains, in which the tissues are torn to such a degree that the damage is far more serious than in many fractures, merely because they are so common are considered of little or no consequence.

Dr. Moullin gives a consistent, systematic and withal helpful consideration to the subject he discusses, which he considers seriatim under the following headings: The Anatomy of Joints; Cause and Prevention of Sprains; Diagnosis; Nature of the Injury; Inflammation and the Process of Repair; Imperfect Recovery; Treatment of Cold, Heat, Pressure, Rest, Forcible Manipulation; Massage; Sprains of Tendons; Sprains of Back and Neck; Internal Derangement of the Knee; Contraction of the Fingers; Muscular Contraction; Muscular Wasting.

CONTENTS OF SCRIBNER'S MAGAZINE FOR SEPTEMBER.

"Deck Quoits on a "P. and O." Liner." Frontispiece. Drawn by O. H. Bacher; engraved by C. I. Butler.

"Steamship Lines of the World." By Ridgely Hunt, Lieutenant U. S. Navy. [The fifth article of the series on Ocean Steamships.] Illustrations by Carlton T. Chapman, O. H. Bacher, Charles Broughton, and V. Pérard; engraving by Heard, Witte, and Van Ness.

"The Wrecker"—Chapters IV.–VI. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August—to be continued.) With a full-page illustration by William Hole.

"Odd American Homes." By John R. Spears. Illustrations by J. H. Twachtman, Charles Broughton, O. H. Bacher, V. Pérard, and E. W. Deming; engraving by Heard, Merrill, and J. Clément.

"The City of the Sacred Bo-Tree—Anuradhadura." By James Ricalton. Illustrations from drawings by Harry Fenn and from photographs; engraving by T. Johnson, Peckwell, Kingsley, Heard and G. Del'Orme.

"For Remembrance." By Duncan Campbell Scott.

"Adventures Among Books." By Andrew Lang.

"A China Hunter in New England." By Alice Morse Earle. Illustrations by V. Pérard.

"Browning's Asolo." By Felix Moscheles. Illustrations by Felix Moscheles; engraving by Witte, E. Clément, J. Clément, Van Ness, and M. J. Whaley.

"Run to Seed." By Thomas Nelson Page.

"Present Ideals of American University Life." By Josiah Royce, Professor in Harvard University.

"Captain Joe and Jamie." By Charles G. D. Roberts.

"The Point of View." History-Writing—Emancipating Fiction—The Author on Exhibition.

Notes and News.

Surgical Thinning of a Fat Man.—

Thanks to antisepsis (writes the Paris correspondent of the Therapeutic Gazette), surgeons nowadays will undertake the boldest sorts of operations, and encroach more and more on the domain of therapeutics. Last month, for instance, Drs. Demars and Marx successfully began the surgical treatment of a patient affected with obesity. In good justice it should be said that all the drugs had been tried in vain, and the man had such an accumulation of fat over his abdomen that it formed a fold, hanging down and covering his thighs like an apron. Not only was walking greatly impeded, but painful erythema and intertrigo had developed to a dangerout extent. Our surgeons decided upon a radical treatment. They made on the abdomen two horizontal incisions, one over the pubis and the other two inches below the navel; the two incisions were about nineteen inches long and six inches apart near the median line, and met at an acute angle on either of the patient's sides. The operators thus removed, adhering to the skin, a strip of fatty tissue, nearly five inches thick, weighing four pounds and a half. The operation having been made under strict antiseptic conditions, the wound healed by the first intention without suppurating, although there were thirty-five suture points, and the patient was three weeks later attending to his usual business. Even a second dressing of the wound never was necessary. The man has experienced so much relief that he wishes to have another operation undertaken, which this time is to be on either side of the umbilicus.

Permanent Public Baths for the Poor.—

In the latter part of August there were opened, with simple ceremonies, the first permanent public baths in the city of New York. The building is situated on Centre-Market Place, in the midst of the east-side tenement district, about half-way between Broadway and the Bowery, and has been erected at a cost of about $25,000 exclusive of the land, which was kindly given for the purpose by the New York City Mission Society. The project has been carried out by the Association for Improving the Condition of the Poor; and on the occasion of the opening of the baths an address was made by Mr. John Paton, President of the Association, and a poem read by Dr. Gouverneur M. Smith, one of the principal movers in the work. The building is attractive in appearance, and its accommodations are capable of providing nearly one thousand baths a day. The departments for the two sexes are entirely distinct, with separate entrances so that males and females can bathe at the same time, and the baths are to be kept open for fifteen hours a day, winter and summer.

The system adopted is that which has been in use for some time in Vienna and other European cities, namely, the shower or rain-bath plan. Adjoining each compartment is a small dressing-room, and most of the baths are furnished with warm as well as cold water. Each bather is provided with a towel of ample size and a small cake of soap, and he is expected to carry home the latter. The price for a bath is five cents, but provisions have been made by which the very needy can secure their baths for nothing. One hundred and twenty-five people are reported to have availed themselves of the baths the first morning they were opened. These new "People's Baths" are the direct result of a movement commenced some time ago by the medical profession, and the Association for Improving the Condition of the Poor is to be congratulated on having carried it out to so happy a consummation.

Inter-State Industrial Exposition of Chicago.—

The nineteenth annual exhibition of this organization will open September 16th, and close October 24th. The great building has been completely and fully decorated, and all available space allotted to intending exhibitors, for what promises to be the most complete and magnificent exhibition in its long history. The Cook County Agricultural and Horticultural Society, with a prize list running into the thousands of dollars, has undertaken a floral display that has never been equalled in this country.

In the building will also be exhibited an exact reproduction in miniature of the buildings and grounds of the World's Columbian

Exposition, with magnificent electric effects; covering as it does a space of 5,000 square feet, it is one of the wonders of modern mechanical art, and will be worth a journey to see. All railroads transport passengers at excursion rates.

Beer-Drinking and Heart Disease.—

It is said (Blätter f. Klin. Hydrotherapie, 1891, No. 4) that disease of the heart is very prevalent in Munich, where the consumption of beer amounts, on the average, to 565 litres per head annually; and in the same place the duration of life among the brewing trade is shorter than that of the general population. Whereas the average age attained among the latter is 53.5 years, that of alehouse keepers is 51.35 years, and of brewers 42.33 years. The same note adds that for the whole of Germany the annual consumption of beer per head amounts to 88 litres, but for Bavaria it is 209 litres.

The Inhalation of Oxygen in Treating Newborn Infants.—

Bonnaire (Bulletins et Mémoires de la Société Obstétricale de Paris, 1891, No. 6) has obtained good results, in cases of fœtal asphyxia from imperfect heart and in infections destroying the red blood-corpuscle, by inhalation of oxygen.

[In severe broncho-pneumonia of infants with marked cyanosis, we have had a similar experience. The dosage depends entirely upon the effect; oxygen may be inhaled until an appreciable result follows, repeated when needed.—Ed.]—*Amer. Jour. of Med. Sciences*, Sept., 1891.

The New Medico-Chirurgical Hospital of Philadelphia.—

In a few weeks the new Medico-Chirurgical Hospital will open its doors. The new building occupies an area of 64 feet front by 134 feet deep; is six stories high, and finished in the most approved style. Its hygenic appurtenances are of the very best. Its front is of magnificent proportions, with an imposing aspect. It consists of brownstone and enough brick to enhance its appearance. The hospital contains 165 beds, the fifth floor being reserved exclusively for private patients.

Therapeutic Brevities.

Adonis Vernalis in Dropsy.—A fresh work on the subject has just been published by Dr. A. N. Lavrovski, whose observations were made on ten male patients suffering from dropsy, who were kept in a ward together in the Alexander Hospital in St. Petersburg. The special object of this research was to discover the effect of adonis on the insensible loss from the lungs and skin in dropsical cases. For this purpose the observations were divided into three periods of several days each, during each of which the ingesta and egesta were carefully weighed and examined, and by that means, together of course with weighing the patients, the insensible loss could be accurately ascertained. It was found that not only did the drug, which was given in the form of infusion, act as a heart tonic and a diuretic, but that it also increased the insensible loss, which, however, did not equal the urine excreted. The action in both respects was somewhat slow in establishing itself, and when the drug was left off things very soon returned, more or less approximately, to their previous condition. The effect, however, was more prolonged in cases where the dropsy was of cardiac than where it was of renal origin. As a rule, it was found that the insensible loss was greater by day than by night. One or two examples may be quoted. A man with weak heart had, before taking adonis, a daily insensible loss of 840. grammes; during the twelve days he took the drug his average loss was 885. grammes; and during the subsequent eight days 831. grammes. The mean daily quantities passed in the three periods were 3056., 3247., and 2645. grammes respectively. In another and more serious case, diagnosed as insufficiency of the aortic valves, with arteriosclerosis and dilatation of the ascending aorta, the effects both on the insensible loss and on the urine were more marked, the average of the former being 802., 1127., and 892. grammes during the three periods respectively, and of the latter 1363., 2202., and 1814. grammes. In a typical case of chronic nephritis the mean figures were, for the insensible loss, 1250., 1592., and 1128. grammes, and for the urine, 690., 1541., and 1144., grammes, for the three periods.—*Lancet*, Aug. 29th, 1891.

Paraffin Oil in Diphtheria.—A. M. Sydney Turner, J. P., M. R. C. S., says in the London Lancet, August 29th, 1891: I have treated thirty cases (children and adults)

vith paraffin oil, and have had the satisfaction of seeing every one recover. My plan s to ask for the ordinary paraffin oil (kero-ene) used in lamps, and, having scraped off he diphtheritic patch, to apply the oil every iour to the throat (internally) with a large amel's-hair brush. As a rule, the throat ets well in from twenty-four to forty-eight iours, and with improvement, the oil to be pplied less frequently; but I continue its use or two or three days after the complete disppearance of the patches. In three very evere cases I found that, as the diphtheria radually disappeared, tonsillitis supervened, hich I treated in the ordinary way. I find rom experience that it does not do to allow he paraffin oil to stand in an open vessel; it eems not to have the curative effect if exosed long to the air. It should be poured ut from the can each time it is used. I can peak definitely as to the therapeutic effects, ut I am unable to state what the chemical ction of paraffin oil on the diphtheritic memrane is; I can only suppose that the hydroarbons in the liquid exert some powerful ıfluence on the membrane. I cannot see hy, as the local action of paraffin oil is so eneficial in these cases, it should not exert n antiseptic influence if vaporized and minled with the air in a room occupied by a iphtheria patient.

In conclusion, I would say that I order a enerous diet for the patient and a mixture ontaining tinct. ferri perchlor. and potass ılor., to be taken every three or four hours, ıd that in some cases where, owing to the teness of the hour, there was a difficulty in otaining the medicine, the throat having een brushed dilligently with paraffin oil, ıere was a decided improvement in the orning before any of the mixture had been ken, showing that the improvement was due lely to the paraffin oil treatment.

Bromide of Ethyl in Surgical Practice.—ccording to the experience of the author, e may resort advantageously to anæsthesia ith bromide of ethyl in a large number of ırgical operations, such as: Incisions of abesses and phlegmons of average extension; notomies; igneous cauterization of angioata and phagedenic ulcers; extraction of questra in panaris and syphilis of the bones; tirpation of small tumors; curetting of turculous ganglions; of the small foci of turculous osteitis, lupoid infiltrations, etc.

Anæsthesia should always be produced, e patient being placed in dorsal decubitus, e heart being carefully examined beforeınd. It is well also first to habituate the tient to the odor of ethyl.

In the inhalations, a mask, covered with rubber and a layer of flannel, is used. At first, a few drops of the liquid are poured into it, then, some seconds later, the entire quantity intended for anæsthesia. The dose is 10. to 15. grammes for the adult, and 5. to 10. grammes for the child.

The mask should be applied hermetically. An assistant observes the pulse, watch in hand, and announces the thirteenth and fifteenth second after the beginning of inhalation. Anæsthesia ensues ordinarily at the end of 50 to 60 seconds. In order to determine the amount of its appearance, the patient is bidden to hold the arm erect; as soon as it falls, operation may begin.

With the exception of one case, in which transient excitation followed anæsthesia with bromide of ethyl, there being no grave symptoms, however, the author has never observed disagreeable phenomena to arise in the procedure indicated. Immediately upon awakening the patients feel as fresh and brisk as before.—Th. Koëlliker in *Centralblat. f. Chirurgie.*

The Physiological Action of Kola-Nut.—Dr. Kotliar, wishing to elucidate the action of kola-nut, which, as is well known, has been recommended for increasing the power of the body to undergo a severe strain of work, has made a series of observations in Prof. Manassein's clinic in St. Petersburg on the alteration of the chemical processes of the body when under the action of the drug. The observations were made on seven healthy young men, each being observed for two consecutive periods of five days. In some the drug was given during the first period, and the subject was kept at rest from work. In others the subjects worked hard, and the drug was given during the second period. The quantity of powdered kola-nut taken per diem was a drachm. From careful analysis of the food and excreta, it was found that, under conditions both of rest and work, kola increased the assimilation of phophorus and sulphur. That of chlorine was increased during rest, but was not altered by kola under conditions of work. The metamorphosis of chlorine was diminished by kola both under conditions of rest and work, especially in the latter case. The metamorphosis of phosphorus was diminished both at rest and at work, but more especially during rest. The same may be said of sulphur. Finally, the breaking up of phosphorus and sulphur compounds both during rest and work, as compared with that of nitrogenous compounds, was diminished.—*Boston Medical and Surgical Journal.*

Treatment of Influenza with Camphor.—During the recent epidemic, when I had on an average 150 cases a week under my care, I had ample opportunity of testing the efficacy of various methods of treatment. My first idea was to try to alleviate the most prominent symptoms—namely, backache and general pains, with sod. salicyl, headache, etc., with analgesin, combining either of the above with a sedative or stimulating expectorant if the chest was affected. I also used ergot and digitalis in combination in a few cases, believing the disease to be simply due to a vaso-motor change, but I afterwards came to regard it as a zymotic disease, with probably a special bacillus of its own. Amongst other drugs I tried camphor, and with so much success that I rarely prescribed anything else afterwards, six doses or less usually being sufficient. I administered it as follows:

℞ Sp. camph., ℥ ij.
Tinct. lavand. co., ℥ ij.
Sp. chlorof., ℥ j.
Mucilag. tragacanth., ℥ ij.
Aq., ad ℥ vj.
℥ j quartis horis sumend.

This costs very little, and, and by leaving out the flavoring agents the effect is the same and the cost nominal.—F. W. Devereux Long, in *British Med. Jour.*

Naphthalin as a Tænicide.—Naphthalin, which is said to be the surest means, of expelling the ascarides, as has been stated by Minerbix, should succeed very well also as a tænicide, and better than the other agents ordinarily employed by reason of the surety of its action and the absence of all toxic effect. For children he prescribes:

Naphthalin.....	0.30 to 0.50 gramme.
Castor oil.....	15.00 grammes.
Bergamot essence.....	2 drops.

Adults may take before eating one powder containing 1. gramme of naphthalin, and immediately after 30. grammes of castor oil.

During the two preceding days, the patient should subsist on salted, acid and spiced foods.

One single dose suffices to expel the tænia with head, even when other tænicides have failed.—M. Mirevitch, in *Annuaire de Thérapeutique.*

For Driving Away Mosquitoes.—(1) Make a paste with mucilage of tragacanth of 500 parts charcoal in powder, 60 parts saltpetre, 40 parts carbolic acid, 250 parts insect powder. Divide into suitable sized cones and use as fumigating pastilles.

(2) Oil of bay laurel, emulsified with soap and with some creolin added, is a good application for animals.

(3) An insecticide of excellent quality is 1 part of solution of borosalicylate of sodium and 50 parts decoction of quassia.

(4) 100 parts each of benzoin and tolu balsam, 500 parts charcoal in powder, 150 parts insect powder, 50 parts saltpetre, made into a paste and employed as No. 1.—*Pharm. Era.*

Benzoate of Mercury in Syphilis.—M. Cochery, in his inaugural thesis, recommends the use of this preparation of mercury as very efficacious, and as being without any inconvenience. It was employed for the first time in Russia by Stoukowenkoff in 1888, and in France by Balzer and Thirloix. It is used as an injection made with chloride of sodium, cocaine, and distilled water, and must be freshly prepared, as a crystalline deposit is soon formed. No gastric or intestinal pains are produced, the salt is rapidly absorbed and eliminated, and the only drawback to its use seems to be that it corrodes the needles easily, and that these when in this condition give rise to sharp pain.

Peptonized Ale and Beef.—It is truly astonishing how rapidly this combination, suggested by the world-renowned Fothergill, has grown into the good will and favor of the medical profession throughout our land. The combination is of great value to nursing mothers, is most useful during the period of gestation, as it not only strengthens the digestive organs, but allays the vomiting that affects so many. It is endorsed by so many of the most eminent among the medical profession, that it is with pleasure we call the particular attention of our readers to the article.—*Dietetic Gazette.*

A New Treatment of Cancer.—Professor Adamkiewicz of Lemberg, who professes to have discovered a new remedy for cancer, has applied to the Austrian Minister of Education for permission to make experiments in one of the establishments connected with the University of Vienna. This request has been granted, and he will make his experiments in Albrecht's Clinic.—*Lancet.*

Compressed Tablets of Quinine and Gelsemium.—Compressed tablets of quinine and tinct. gelsemii, have been suggested by Dr. Barrett, of Hinckley. These tablets form a convenient mode of administering this special combination.

Medical Progress.

Nitrous Oxide and Oxygen as an Anæsthetic.—In the American Journal of the Medical Sciences for August, Dr. William W. Van Arsdale give a detailed account of his experience with a mixture of nitrogen monoxide and oxygen as an anæsthetic. Nitrogen monoxide alone has been definitely abandoned in minor surgery except for the very shortest operations, such as single incisions and tooth extraction. It produces asphyxia by shutting the oxygen off from the blood; it also produces anæsthesia by its specific action on the blood and nerves. Many experimentors have tried to secure the anæsthetic without the asphyxiating effect. The problem was solved by the late Paul Bert. His method of reasoning, says Dr. Van Arsdale, was this:

Pure nitrous monoxide causes anæsthesia at atmospheric pressure, but also asphyxia. The latter can be obviated by the admixture of as much oxygen as is contained in our atmosphere—*i.e.*, one volume of oxygen added to four volumes of the nitrogen monoxide. If, however, this admixture is made, the tension of the nitrogen monoxide in the mixture is not as great (by one-fifth) as it was before the admixture, and consequently no anæsthesia will be produced. In order to remedy this it is only necessary to increase the atmospheric pressure by just so much as the tension of the nitrogen monoxide gas is weakened by the addition of oxygen, namely, by one-fifth atmosphere. If this be done the result of inhalation will be anæsthesia without asphyxia.

The practical problem presenting itself for solution was how to obtain the atmospheric super-pressure. It was solved by Paul Bert by building a hermetically-sealed glass cage with proper arrangements attached for increasing the atmospheric pressure. Into this cage the patient, and the surgeons, and assistants were all admitted, and here the gas was administered.

The practical obstacles in the way of this method are, the expense of the apparatus, which alone amounted to 10,000 francs, and the difficulty of its transportation.

With this arrangement, however, success was manifest. A large number of operations were performed by L'Abbé and Péan.

Subsequent experimentors confirmed in general the views upon which Bert's method was based. A good many tried to use mixtures of the nitrous oxide and oxygen in varying proportions, with only moderate success. Dr. Van Arsdale began his experiments with mixtures containing twenty and fifteen per cent. of oxygen, but the results were not very uniform or satisfactory. They were better than a ten per cent. mixture, and this was the combination finally adopted. The great difficulty in most cases was found to lie in the fact that patients would not breathe deeply. Hence it was proposed to give the gas under a pressure which would force the air into the lungs. This was done by fitting an air-tight mask to the face and placing a board weighted to five pounds on the reservoir bag. It was found that the first bag of gas from the cylinder contained too much oxygen, and it was not used; the last one contained too much nitrous oxide, and caused slight cyanosis. The large cylinders were the better.

The results obtained by using the mixture under pressure as described were in some cases brilliant, but there were also failures, due to nervousness, idiosyncrasies, and perhaps alcoholism.

Dr. Van Arsdale says: "We find the field for the adminisration of mixtures of monoxide and oxygen considerably narrowed down, and are obliged to rule out, as unsuitable, quite an appreciable percentage of all the cases we may be called upon to treat.

"In the majority of cases, however, in young, healthy individuals and in females, the anæsthetic mixture, when administered under pressure, was found to work well and to be much superior to the pure nitrogen monoxide for surgical purposes. It induces a state resembling a quiet, deep sleep, in which the respiration is slow and regular, the pulse regular and full, aud not much, if ever, increased in frequency. The blood-pressure is not increased; and insensibility to pain and unconsciousness go hand-in-hand.

"We have," he says, in conclusion, "in the ten per cent. mixture of oxygen and nitrogen monoxide, an anæsthetic which may be administered with perfect safety and for a sufficiently long time to permit of the circumspect performance or most minor operations, but one which may be characterized as a weak anæsthetic. For although it will plunge the average adult into a state resembling peaceful slumber, in which anæsthesia and unconsciousness are well marked, it cannot gain victory over states of great nervous excitement or dread, or certain habits or idiosyncrasies."

These conclusions appear to have been carefully worked out, and to present very truthfully the present position of the subject of nitrous oxide anæsthesia.—*Medical Record*, Sept. 12, 1891.

Treatment of Swallowing Foreign Bodies.—Within the past year or two I have noticed in several medical journals the reports of "potatoe cure" in cases of foreign bodies in the stomach, the last of which is given in the International Journal of Surgery, as related by Dr. E. Pisko, when a screw was swallowed by a child, and passed safely through the intestinal canal on the fourth day.

As my experience antedates any of the cases published since the now popular treatment with potatoes was first suggested, I venture to give you the treatment which I have many times used since my first important case in 1837.

In the summer of that year I was riding into Georgetown, S.C., when I was attracted by a man rushing wildly from his house and calling loudly for a doctor. I checked my horse at his door, when he and his wife, with bated breath and swimming eyes, reported that their little girl, two years old, had swallowed a knife with but one blade, the handle trimmed with brass, which they considered deadly poisonous. After a moment it was explained that it was a toy known as a "dog knife," a little less than two inches long and about three-quarters of an inch wide, the sides and casing of the blade of iron and painted red, but bound with brass. My directions were to feed the child with nothing but "corn hominy" softened with sweet milk, and to give all that she would take—to stuff her—and at the end of the second day to administer a dose of castor oil. The directions were carried out, and on the morning of the third day the knife was found in the discharge, cased in a roll of fæcal matter like a sausage, having caused no pain or distress in its passage through the intestinal canal.

Since that case I have had several others calling for advice, such as the swallowing of marbles, small silver and copper coins, all of which were treated with hominy and milk, followed by oil as an evacuant.

The most noted case in my record-book, however, occurred in 1852. A small colored boy, aged three years, swallowed a large fish-hook which he had mischievously cut from his father's line, and when detected put into his mouth, and in his fright and confusion it went down his throat, no one could say how or with what difficulty, as he simply reported when his mouth was examined that it had slipped down his throat.

The boy was made to eat largely of mush and milk three or four times a day for two days, and on the evening of the second day, as in all the other cases, castor oil was given with the view of procuring a good large evacuation. The result was satisfactory, for on the third morning the hook was washed out of a semi-solid stool, moulded to the shape and size of the lower gut. My idea was that any farinaceous diet would protect the mucous membranes from irritation, and prevent spasm or contraction of the muscular coats of the stomach and intestines when a solid foreign body had been introduced. That fine corn, hominy or mush, with milk, is just as good as the potatoe treatment, my experience has demonstrated practically.—Jas. R. Sparkman, M.D., in *Dietetic Gazette*.

Electro-Microscopic Slide for Testing the Antiseptic Power of Electricity.—I represent in the accompanying cut an instrument devised by myself for the purpose of ascertaining whether electricity would destroy the life of germs or not. It is the result of a number of experiments to confirm the belief I have long held, that electricity is an antiseptic and disinfectant, and it was while I was engaged in these experiments that I discovered that Apostoli had made the same claim. The instrument consists of a glass slide, in the centre of which is a sunk cell. Two grooves, each three-fourths of an inch long, run from the sunk cell outward. Two brass pieces are fitted over the extremities of the slide in such wise that their rounded points, the under surfaces of which are lined with platinum, will cover a portion of the grooves. These rounded points should not touch the glass, but should be raised above the grooves about one-eighth of an inch. Binding-posts are riveted to the brass for connection with a battery. In order to apply the instrument a sufficient quantity of the fluid containing the bacteria should be used to fill the sunk cell and grooves. A cover glass is placed over the sunk cell and its contents. Two small, clean sponges saturated with either the fluid or distilled water, are then placed underneath the platinum points, and in contact with the fluid in the grooves. The bacteria are now ready for observation; the electricity is turned on, and the quantity required to stop all signs of germ life noted by the milliampèremetre. They can now

be cultivated on gelatin in the ordinary way, if desired, to determine whether their vitality has been entirely destroyed. Other uses for this slide will readily occur to one working in this field, *e.g.*, the effect of electricity on blood and different tissues. I have found this instrument very satisfactory, not only as an easy, but as a quick, way of finding out the amount of electricity required to destroy these micro-organisms.—R. L. Watkins, M.D., in *Medical Record.*

Inoculation of a Japanese with Scarlet-Fever Germs.—A. S. Ashmead, M. D., reports in the New York Medical Journal, September 5th, some interesting experiments made with the object of obtaining a modified lymph to prevent scarlet-fever in the Caucasian. He reports two tests of this vaccination as follows:

On May 17th I inoculated with scarlet-fever germs a native of Nagano-Ken, Japan, aged twenty-four, three years resident in this country. There was no family history of syphilis or leprosy. The germs were taken from the desquamations on the forearm and palm of a German child, aged two years and three months, a patient of Dr. Ernst F. Ruppe. I took them on the twenty-fifth day, pursuant to a suggestion of Professor Edington, of Edinburgh. They were inserted in the left forearm.

The result of this was the development of an areola of intense scarlet, severe inflammation of throat and fauces, headache—but very slight elevation of temperature.

In a second case Dr. Ashmead states: In this second attempt I have produced a condition which may or may not be a modification of the disease, but certainly is not the disease itself.

This case was exhibited, on the sixth day after inoculation, to Drs. Lester and Wolff, at the Willard Parker Scarlet-Fever Hospital. I gave Dr. Lester some of the lymph from the arm. On the seventh day after inoculation the case was exhibited at the Hoagland Laboratory, in Brooklyn, to Drs. Bristow, Van Cott and Dickinson. Dr. A. T. Bristow received various products for bacteriological culture, namely, blood from the areola, lymph from beneath the crust, and specimens of the crust itself. I have since left with Dr. Edson, Chief of Contagious Diseases Bureau, New York Board of Health, and Dr. Lester, portions of the crust. I intend to inoculate this case again with scarlet-fever germs, obtained as before, and note whether the same results will follow.

I may observe that during the whole time of the experiment the patient was in continual relation with my own children, without any contagion taking place.

I have a half-breed child (Japanese and American), aged four, a foundling, whom I intended to inoculate with pure scarlet-fever virus. Dr. Joseph William Stickler, whose investigations in this line are well known, wrote to me in regard to this case: "I do not consider it safe to do such a thing, unless you are certain that the virus has been attenuated in strength to a degree that will render it a safe agent to use; you cannot tell prior to inoculation just how susceptible your subject may be. Hence the impression made upon the system may be very severe, or very moderate. It may be severe enough to cause death."

I therefore do not feel justified in making this attempt. But perhaps the presumably attenuated virus obtained from my Japanese subject may be used with safety.

The Application of Hot-Air Tar Baths in the Treatment of Rheumatism.—Dr. Paul Chevandier has written an interesting thesis on this subject, from which we extract the following: Hot-air baths were first used in Oriental countries and introduced into Europe by the Moors. It appears that the natives of Mexico, at the time of the discovery of America, also employed heated air saturated with aromatic vapors in the treatment of rheumatic pains. The aborigines dug a hole in the ground large enough for a man to lie in, and over this built a sort of dome of stones and clay, the whole structure looking somewhat like a baker's oven. The bottom was covered with aromatic shrubs, on which the sick man lay.

In France, ovens in which resinoid matters were burned were employed in early times for the treatment of rheumatism. Later the oven was replaced by a "fumigation chamber." In the latter a fire is built, which heats the air and impregnates it with resinous vapors, which are conducted to several chambers communicating with the furnace.

According to M. Chevandier, there is little or no analogy between the physiological effects of dry thermo-resinous vapors and those of ordinary steam vapor baths. The former produce redness, congestion, and tension of the skin, the latter soften and relax it. The diaphoresis produced by the former results from the increased activity of the sudoriparous glands, while the sweating from the latter is due simply to a passive exudation. In dry-air baths one can readily endure a temperature of 70° to 80° C., while

in the ordinary steam bath a temperature of 50° C. is very uncomfortable, and 55° C. causes a burning sensation.

In hot-air tar baths of a temperature of 60° C. the patients perspire freely and absorb large amounts of oleo-resinous vapors, as is shown by the strong odor of violets emitted by the urine. A short time after the bath the perspiration becomes so abundant that some patients lose as much as 1,000. grammes of bodily weight within half an hour. A miliary eruption may be developed, but this will disappear spontaneously within twenty-four hours. Headache is observed in rare instances, but yields readily to the application of cold to the head. The digestive functions are stimulated. Some nervous excitement, insomnia, and irritability, are observed for a short time after the bath, and sometimes a transient recurrence of the rheumatic pains. These hot-air baths are serviceable in the different forms of apyretic rheumatism. The profuse diaphoresis is never debilitating, but the duration and number of the baths should not exceed the limits assigned to hydrothermic treatment.—*Journal d'Hygiène.*

Points in Ureteric Surgery.—Dr. Pezzer, in a paper read before the French Surgical Congress, which is reviewed in the Union Médicale, has called attention to some new sounds by which he practices permanent catheterism of the bladder. The instruments are made of pure rubber, so that they may be safely and thoroughly sterilized by boiling or steaming. They are constructed by M. Mathieu with a soft, elastic bulb at the extremity, which becomes effaced upon the introduction of a stylet and reproduces itself when the latter is withdrawn. The comfort with which these instruments were borne in the bladder caused Dr. Guyon to suppose that similar sounds might be left in the ureters after operations upon the bladder, and thus give the latter organ complete rest until cicatrization and healing had taken place. These small catheters have therefore been made, capable of retaining themselves in the ureter by the elastic pressure of their bulbs upon the ureteric walls. They were first used in dogs successfully, and afterward, by M. Guyon, in the case of a young woman upon whom he had operated for tuberculous ulceration of the neck of the bladder. The experiment was altogether successful, and the case was reported to the Société de Biologie by M. Albarran, a student of M. Guyon's.

The report produced a contention upon the point of priority in the operation of permanent catheterism of the ureters, M. Poirier alleging that Pawlik, Segond, and himself had each practiced the method before M. Guyon. The facts in the case show, however, that these operators had left their instruments in the ureters for from thirty-six to forty-eight hours only, while M. Guyon had left his in for many days. If this latter fact does not constitute a new method, it certainly is a great improvement upon the earlier ones.

This question of priority, however, is of small moment compared with the startling observations that M. Poirier afterward brought before the Society upon this same subject of catheterism and injection of the ureters. He asserted that oil or grease injected into the ureter with a certain amount of force passed into the renal vein without any rupture of the kidney tissue, and, *vice versa*, that the injection of oil into the renal vein shows itself in the ureter. These facts, says Poirier, should have been observed by all anatomists, but, lest it be objected that the occurence is a post-mortem phenomenon, he has shown, he says, that water injected into the ureter of a living anæsthetized dog passes out in waves or jets through the renal vein. From these alleged facts one may be led to recognize the necessity of extreme caution in the practice of ureteric catheterism and injections, for the liquid may be forced back into the blood through the kidney tissue, thus producing thrombosis or nephritis. Moreover, should the catheters become obstructed or inadequate to the demands upon them, the retained urine may filter back into the blood, and thus cause systemic poisoning.—*New York Medical Journal*, Sept. 5th, 1891.

Immunity Against Croupous Pneumonia.—While upon the subject of the treatment of pneumonia, the experiments of Prof. Emmerich, of Munich, relating to the production of an artificial immunity against this disease and to curing the same, should be noticed. Emmerich has just reported his experiments before the late Congress of Hygiene and Demography in London.

From previous experiments Emmerich has been led to believe that immunity against infectious disease is produced by a toxine inimical to bacteria, but innocuous toward the cells of the animal body. In an immune animal, at least soon after immunity has been produced, this substance should be found in its blood and other tissue fluids.

By subjecting a rabbit to an intravenous injection of a very dilute but completely virulent culture of the *diplococcus pneumoniæ*

Fränkeli, it is rendered immune. Rabbits so prepared were killed, skinned, divided, and rubbed up into a fine paste, which was pressed through the meshes of a clean sterilized cloth. The bloody juice was kept for twelve hours at a temperature of 10° C. (33.8° F.), then sterilized by passing through a Pasteur filter. Twenty-six rabbits, one of which had been subjected to an injection of the immunizing juice, were subjected in an inhalation apparatus to the action of a spray of bouillon culture of diplococci. All died speedily except the one animal protected by the immunizing juice.

In a second series of experiments, seven mice were injected with a virulent culture of the *diplococcus pneumoniæ*, in quantities varying from 3 c. c. to 5 c. c. Six of them were then injected with the immunizing or curative juice, as it may now be called. In 44 hours the unprotected mouse was dead, the autopsy showing diplococci in the blood and internal organs in great quantities, while the other six mice were all well. As these last experiments were made during the last three days of July, we must wait further for fuller returns.

In a further experiment with three mice, the first two were injected with 0.5 c. c., and the third with 0.3 c. c. of a virulent culture. Five hours later the first two mice received 2. c.c. of the curative juice, but not of a fresh preparation. The following day all of the mice were sick, the third being worse than the first two. The first was given an injection of 1. c. c. of perfectly fresh curative juice, whereupon it recovered rapidly. The second and third both died.—*Journal of the Amer. Med. Association.*

The Influence of Diet on the Growth of Hair.—Several cases of shedding of hair after influenza have confirmed my opinion that diet has much to do with the production and cure of symptomatic alopecia. Hair contains 5 per cent. of sulphur, and its ash 20 per cent. of silicon and 10 per cent. of iron and manganese. Solutions of beef, or rather of part of it, starchy mixtures, and even milk, which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair result. The color and strength of hair in young mammals is not attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above-named elements are the various albuminoids, and the oat, the ash of that grain yielding 22 per cent. of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism. I have often found a dietary largely composed of oatmeal and brown bread greatly promotes the growth of hair, especially when baldness is preceded by constipation and sluggish capillary circulation.

Those races of men who consume most meat are the most hirsute. Again, it is well known in the Zoological Gardens that carnivorous mammals, birds, and serpents, keep their hair, feathers, or cuticle, in bad condition unless fed with whole animals, and the egesta contain the cuticular appendages of their prey in a digested or partly digested state. It is also an old well-proved fact that a closely restricted diet—cheese, for example—soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhœa, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vaso-motor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. I have always found that friction of the scalp with pomades and lotions, dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt added, and rough rubbing of the rest of the body, will flush the capillaries of the affected parts more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness.—Dr. Mapother, in *British Medical Journal.*

The Therapeutic Value of Cannabis Indica.—The virtues of cannabis Indica are well known to neurologists, and especially to asylum physicians, but the profession generally does not appear to have great confidence in the drug. We are therefore pleased to see a letter in the British Medical Journal for July 4th, by Dr. C. W. Suckling, Professor of Medicine in Queen's College, Birmingham, calling attention to the value of cannabis Indica in a variety of morbid conditions. He stated that during the last few years he has been accustomed to prescribe it in many affections. In one form of insanity, more common in women than in men, and brought on usually by mental worry, often owing to the illness of a near relative, or by a moral shock, the drug acts almost as a specific. In this affection the patient is depressed and apprehensive, and imagines that

animals are after her or that some one is trying to injure her. There are great mental confusion and mental loss, the patient is unable to carry on any conversation, and sometimes is unable to dress herself, the condition being one of acute dementia. The author says that he has notes of several such cases that have been cured with cannabis Indica within a fortnight. He usually gives ten minims of the tincture three times a day, combined with iron and strychnine. He prescribes also complete rest and plenty of food. The cannabis Indica is an essential factor in the treatment, for without it the rapid recovery does not follow; it seems to remove the mental distress and the restlessness.

Cannabis Indica has proved very useful in his hands in the treatment of melancholia and mania. He has found it of great value in the treatment of chorea when arsenic fails. It may be combined with chloral with advantage in such cases. In migraine the drug is also of great value; a pill containing a quarter of a grain of the extract, with or without the same amount of phosphide of zinc, will often check an attack immediately, and if the pill is given twice a day continuously the severity and frequency of the attacks are often much diminished. The author has met with patients who have been incapacitated for work from the frequency of the attacks, and who have been enabled by the use of cannabis Indica to resume their employment. The drug is also a valuable gastric sedative in cases of ulcer of the stomach and gastrodynia. It may be combined with nitrate of silver, and it increases the efficacy of the latter. It is also a valuable hypnotic.

Dr. Suckling omits an important practical point in connection with the use of cannabis Indica. We refer to the difficulty of procuring reliable preparations of the drug. We have reason to believe that this difficulty exists in England as well as in this country. This fact probably accounts in a large measure for the distrust of the drug felt by many physicians. They have found its action so uncertain and irregular that they have abandoned its use altogether.—*N. Y. Medical Journal.*

An Efficient Cough Mixture.—There are few who do not suffer more or less from severe forms of bronchial affections accompanied by annoying cough. The most marked indications for treatment are to restore the dry mucous membrane to a condition of normal secretion, and to overcome the interference of respiration by stimulating the respiratory centers and to allay the inflammation and irritation by sedatives and demulcents.

The combination which meets these requirements very nicely is that entitled "Anodyne Pine Expectorant," consisting of white pine bark, wild cherry bark, sassafras bark, blood root, balm of Gilead bud, chloroform, spikenard and morphine acetate.

The value of the aromatic and resinous ingredients of balm of Gilead (balsam poplar) buds and sassafras has long been recognized. In the former we find benzoic acid and its derivatives; this acid has long ago found a permanent and useful place in medicine, as is witnessed by its employment in paregoric and various other remedies, either in a pure form or by reason of its being a component of some of the ingredients used.

The irritant and expectorant properties of blood root are very happily conjoined with those of the astringents which have the power of contracting the mucous exudations, and thus loosening them from the membranes to which they are attached.

The sedative properties of chloroform, morphine and wild cherry here find useful application, enabling the preparation to be used in a large variety of affections.

In pulmonary difficulties it has been found useful as a palliative, besides being an excellent vehicle or corrective for cod-liver oil.

Electro-Therapeutics of Graves' Disease.—Dr. Cardew, M.R.C.S., Lancet (London), is of opinion that many cases in which drugs have proved valueless are amenable to electrical treatment. For this purpose Galvanism is superior to Faradism. A very weak current (two to three milliamperes) is sufficient. Each application should last six minutes, and frequent applications (three times a day) should be made. The anode should be placed on the nape of the neck, the centre of its lower border corresponding to the seventh cervical spinous process, and firmly held in that position during the application. The kathode should be moved up and down the side of the neck from the mastoid process along the course of the great nerves. The application is followed by a reduction in the frequency and force of the heart-beat, prolongation of the diastole being most marked. The slowing of the pulse-rate does not usually last more than half an hour. The diminution in violence of beat lasts longer. As the case progresses and improves these effects become permanent.—*Amer. Jour. of Med. Sciences.*

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Original Articles.

ON THE RELATION OF CERTAIN AFFECTIONS OF THE LIVER TO MICROBIC INFECTIONS—TWO CASES OF JAUNDICE ENDING IN DEATH (CALCULOUS ICTERUS, ICTERUS OF PREGNANCY.

BY DR. F. RAYMOND.

I desire to call your attention to-day to two cases of jaundice which have recently came before your notice in our female wards.

These patients, who have both died, the one a few days after the other, have presented clinically quite different aspects, and you have seen on the post-mortem table how little the lesions in the two cases were alike.

Nevertheless these two cases seem to me to belong to the same category, from the point of view of pathogeny. In the first place, both cases are affections of the biliary passages, angiocholitis in the one case, cirrhosis in the other. I believe also that in both patients we have to do with a disease of infectious origin.

It is true that no bacteriological examination was made during life, and we have not had any opportunity to make cultures since the death of the patients. Nevertheless, the bacteriological examination of the viscera of the second patient justifies the affirmation that this is a case of infection, due to a diplococcus. We have, in fact, found this microbe in great abundance, in a state of purity, in the liver, spleen, and kidney, and so localized that it was impossible not to conclude that we had before us a case of ante-mortem infection.

I will begin by giving you the clinical history of patient No. 2. This case was so clear and so typical that it will be an easy matter for you to get an idea of the morbid group to which it belongs:

Marie B—, aged 25 years, a domestic, entered the ward Trousseau March 25th, 1891, for a *febrile icterus* which began with the symptoms of hepatic colic.

Of good previous health, she had never had jaundice or any other disease of the liver. Nine days ago, she was suddenly seized with a violent pain in the right hypochondrium without irradiations into the limbs, and this pain was augmented by pressure. Among other symptoms were chills, then fever, then continuous bilious vomiting. No food could be retained. Four days after the onset of the disease, she perceived that she was becoming yellow, then the jaundice was pronounced. She complained principally of pain and of vomiting.

At the date of her entering the hospital, the ninth day, the prostration, jaundice, and fever, were well marked, and the temperature was 104° F.

The liver was not hypertrophied, if anything, was under the natural size, not descending below the lower ribs. The region of the liver was not painful. Spleen was augmented in volume; abdomen supple; symptoms referable to the heart, lungs, and nervous system—negative. Vomiting was persistent. The deep-colored urine contained in notable quantity the coloring matter of the bile; no albumen.

There have been no hæmorrhages; bowels constipated.

March 27th and 28th.—A purgative enema; a stool the next morning. Vomitings have diminished.

March 31st.—Quantity of urine of 24 hours, 700 cub. cent. Quantity of urea, 28. grammes (41. grammes per litre).

April 2d.–Morning temperature 37.8° (100.3° F.). Vomiting continues; the general condition somewhat improved. The next day the temperature was about two degrees higher. The jaundice has not sensibly diminished. Integuments have taken on a greenish coloration. Patient vomits everything she eats. Ordered abstinence from all food, bits of ice;

quinine, fifteen grains in divided doses during the day.

The following days the temperature went up to 103° and 104° F. Vomitings ceased.

April 10th.—Temperature remains high, 103° morning, 105° evening. No vomiting, no pain; great prostration. Liver is augmented in volume and comes below the lower ribs by two or three fingers breadth. The urine still contains the coloring matters of the bile, but in less quantity. No albumen. Pulse 120. Urine of 24 hours, 700 c. c. Urea, 9. grammes=14. grammes per litre. Jaundice color is giving way to a dusky pallor. Prescribed a podophyllin pill.

April 14th.—Slight fall in temperature. Vomitings have returned; every thing is rejected. Liver voluminous. Adynamia. Urea, per litre: 17. grammes.

April 16th.—The debility has kept on increasing. Delirium in the night time. Pulse small and flickering.

April 20th.—Delirium, vomiting, approaching coma. Fever at night, 105° F.

April 23d. Death occurred at 6 o'clock A. M.

Post-mortem Examination.—The liver weighed 1950. grammes (about 4 pounds), color violaceous, with marbled yellow spots here and there and ecchymotic patches. Consistency soft, so that the organ sank in on the table and gave the sensation of fluctuation. On palpation, in its interior were felt numerous little hard nodules. On section you who were present saw that the tissue was reduced to the state of a yellowish pap which could be easily scraped with the knife handle. All the surface of the section was strewn with golden yellow nodules of the size of a large pea. The nodules were very hard, of dry and caseous aspect and presented in their center little cylindrical moulds of a pasty, bilious matter; we had in fact, cut into a number of ramified biliary abscesses, not softened but caseified, dried and transformed into a sort of necrosed (core-like) detritus. The large bile ducts were enormously dilated and full of muddy biliary sediment as far as the mouth of the common duct, where was found a small mulberry-like calculus which completely obliterated the canal; and here the mucous membrane was ulcerated. The kidneys were of a rosy gray color and were almost as diffluent as the liver.

The spleen soft and tumefied weighed 260. grammes. I omit the description of the other organs which presented nothing in particular; there was nowhere else any abscesses.

The microscope enlightened us as to the nature of the morbid processess. Some slides were made with the spleen juice; these showed numerous diplococci somewhat elongated in shape. These microbes took staining well by the method of Gram. No capsule was seen.

The liver presented two kinds of alterations; first the abcesses then a total necrosis of the rest of the parenchyma, of which none of the nuclei could be stained by hæmatoxolin—neither the nuclei of the connective tissue nor those of the hepatic cells.

The biliary abcesses offer for consideration three zones:

1. A center formed by detritus where we can still in places recognize the walls of a dilated bile duct:

2. A middle zone constituted by a veritable reticulum of biliary concretion; it would seem that the small capillary bile ducts of the neighboring lobules were filled with microscopic calculi with disappearance of the adjacent anatomical elements, leaving a veritable reticulum:

3. Lastly, a zone of embryonic infiltration, whose nuclei stain well; this new formation tends to encyst the abscesses; the caseous degeneration of these abscesses is manifested in many points. The same diplococci which we have seen in the spleen are seen in the liver; they no longer exist in the central part of the abscesses; in the embryonic zone are seen some which are evidently engaged in a struggle with the phagocytes. Lastly, the rest of the hepatic tissues is stuffed with diplococci. In places are seen enormous masses of these microbes which seem to be enclosed in cells, as if they had just been having a victory over the macrophagi. In the vessels there are some which are confined within the lymphatic cells.

The kidneys present the lesions of diffused nephritis in the most intense form. The epithelium of the convoluted tubes is completely necrosed, and there exist numerous

capilliary-microbic emboli both in the vessels of the pyramids and in the vascular groups of the glomeruli.

I come back now to the clinical part of the case. From the beginning of her attacks of hepatic colic, our patient has had a fever of a more or less remittent type; the onset was a chill. This fever announced the commencement of an *infection* which has been sufficiently proved by the general state the typhoid aspect of the patient, the tumefaction of the spleen, etc. This is the *hepatalgic fever* so well described by Charcot. There exist numerous forms, of variable intensity.

Sometimes the febrile movement is reduced to certain nervous manifestations. Sometimes it is a violent attack, of malarial type, a single outbreak beginning by a violent chill followed by a stage of fever and a stage of sweating. In both cases the fever is intimately linked to the migration of a calculus in the bile ducts, and it borrows from this origin its capricious character; sometimes, even, the fever is not accompanied by pain, and constitutes by itself alone, the symptomatology of an abortive form of hepatic colic. Hence it is that in old men, if you are not on your guard, the signification of certain febrile accessions of like origin may completely escape detection.

Other types manifest an infection more profound and more enduring. Thus the febrile accessions may be repeated, and the fever take on an intermittent form, resembling to a certain extent a malarial fever; or we have a veritable suppurative fever of remittent type.

This fever has long been compared to urinary fever, of which it reproduces faithfully the characters. As for its cause, Charcot had indicated it at a period when microbiology did not exist; these are his words: "Intermittent hepatic fever is due to the presence in the dilated and inflamed biliary passages of a septic principle. This principle is thus far unknown, as well as the conditions which preside over its formation."

To-day we are more advanced on this question of pathogeny; the microbian origin of urinary fever has been demonstrated by Albarran and Halle. In cases of hepatalgic fever, microbiologists have also found at the moment of the accession, bacteria in the blood. I have particular reference to cases of hepatic colic which get well after having been accompanied by intermittent or remittent febrile paroxysms where certainly there was no general constitutional infection as the starting point, and where there were no profound lesions of the bile passages; where, finally, the infection of the blood had its point of origin in the calculus of the liver. Ernest Dupré, in his recent thesis, gives an account of the examination of the blood of the spleen in two patients who had similar attacks, which were very typical. In both cases he found the staphylococcus aureus and albus. It seems, then, demonstrated that through a simple erosion such as the passage of a calculus in the bile ducts can produce, the microbes contained in these passages pass into the blood with great rapidity, and give rise to an intense febrile paroxysm.

Sometimes, even, the micro-organisms which circulate in the blood may graft themselves into the valves of the heart and give rise to a vegetant endocarditis, as in the case of Netter and Martha where the infectious agent was a bacillus which inhabits the digestive passages in the normal state.

Let us now return to our patient. You remember that this woman dated the onset of her fever to the first attack of hepatic colic which she had, and that she was taken at that time with violent chills. Now at this time it is certain that the lesions of the bile ducts did not exist, or amounted to simple erosions. Later, septicæmic fever set in. A question comes up in this connection: How was it that the microbes could have so rapidly invaded the obstructed bile ducts?

Without doubt we may suppose that they came from the intestines, ascending the common bile duct by reason of the biliary stasis following the obstruction of the bile duct by a calculus. At the same time, the precociousness of the fever would seem to indicate that the microbes preëxisted in the bile. This demands an explanation. You know that in the normal state the bile ducts, as the bile, are aseptic; but this is not the case under certain circumstances that are pathological. Now, in the opinion of some authorities, the microbes which thus penetrate the bile ducts play an important rôle in the formation of biliary calculi. Already

before this theory took shape, Ueckel, Lobstein, Bonesson, and Frerichs maintained the influence of chronic catarrh of the gall bladder on the formation of calculi; now, according to the notions of the present day, the existence of a catarrh presupposes the presence of micro-organisms in the mucous membrane which is the seat of a morbid secretion. More recently Bernheim has pretended that typhoid fever may engender biliary lithiasis in subjects predisposed. Then Galippe noted the presence of microbes in the very centre of bile stones, and attributed to these microbes a pathogenic influence. Lastly, Dupré has given us in his thesis an interesting case of biliary lithiasis supervening six months after recovery from a typhoid fever; symptoms of infection having necessitated a surgical operation on the gall bladder, it was possible to observe in the living subject the existence of a biliary infection due to the bacillus of Eberth.

You now understand that the existence in our patient of a gall-stone warrants to a certain extent the hypothesis of an old infection of the bile passages, an infection that at the time passed unnoticed. Admitting that this hypothesis is well founded, we conclude that the latent microbism has engendered the biliary lithiasis. The latter, in its turn, creating a *locus minoris resistentiæ*, opened the door for the bacillus to enter the system, invade the tissues, and produce the fever and other general symptoms.

So much for the pathogeny. I have now a word to say as to the *quantitative variations* of the *urinary secretions*, and the *excretion of urea*.

About the onset of the disease, March 31st, the quantity of the urine of the twenty-four hours was 700 cub. cent. only; 28.7 grammes of urea = 41. grammes per litre. Now, in the normal state you know that a woman excretes on the average 1800. grammes of urine containing 35. grammes of urea = 23. grammes per litre. Hence, then, at this period the urinary secretion was insufficient, and this is an unfavorable sign; nevertheless, we must make allowance for the vomiting and for the febrile state which divert toward other emunctories (stomach and skin) a part of the water which in the normal state is eliminated by the kidneys. And, in fact, this urine was so concentrated that it contained in its totality a quantity of urea relatively little inferior to the normal.

About the 10th of April the situation underwent a complete change. The quantity of urine remained at 700. grammes, but the urea fell to 9.8 grammes. This was an indication of a giving-out of the liver, which is one of the principal centres of production of urea, a functional break-down announced, moreover, by other symptoms; the volume of the gland augmented, but the quantity of the coloring matters contained in the urine diminished progressively; the icteroid skin assumed a decided pallor; the biliary function was then giving out, as well as the urea-producing function. At the same time, the prostration of the commencement increased from day to day, to give place at last to a profound adynamia; delirium appeared, the pulse became thready, and the patient succumbed after thirty-six hours of coma.

I cannot too much insist on the importance of the study of the variations in the curve of urea in diseases of the bile passages. When this curve keep at the normal level or above, you can affirm integrity of function of the hepatic cells. When the urea excretion falls below the normal, the icterus is aggravated, and death is not far distant. I must call your attention in this connection to the researches of Charcot, Brouardel, and Debove, which seem to have definitely proved the rôle of the liver in the formation of urea.

You know also that the destruction of the hepatic cell, whether caused by an infection propagated from the bile passages, by a general infection of the blood, or by a poison brought by the portal vein, manifests itself clinically by the train of symptoms known as *grave icterus*.

It is known that, among other functions, the liver has that of destroying or eliminating a certain number of poisons which circulate in the blood in the normal or pathological state. The suppression of this rôle of emunctory may explain not only the gravity of the icterus which is observed in such conditions, but also the renal lesions which supervene in such cases, and which you have noted in our patient. We have not observed the albuminuria which is the rule in such cases. And yet the kidneys were altered so

as to be almost suppressed, functionally. These lesions of the kidneys are largely due to the excretion of soluble poisons which the liver was not able either to destroy or to eliminate. These renal lesions, when once produced, constitute a new cause of aggravation; they indicate the closing of the last door of exit for excrementitious substances, after the functional suppression of the liver.

Such are the considerations which I aimed to present respecting the patient whom we have observed together. This patient was, on the whole, a fine type of infection of the biliary passages by a diplococcus whose bacteriological characters we have not yet been able to determine.

As for the origin of this infection, and the connection of the morbid phenomena observed in our patient, I will sum up in these words what I have just said: The presence of calculi in the bile ducts enables us to decide respecting the pre-existence of microbes in these passages which are aseptic in normal circumstances. This microbism remains latent till the day when an erosion caused by a calculus furnishes to the microbes an opportunity to pass into the blood, whence the hepatalgic fever. The microbes entering the blood infect the tissues, and especially the liver. The infection of this gland ends in the destruction of the hepatic cells and in the suppression of their function; hence, a diminution in the production and excretion of urea and of bile; a typhoid state is established, without doubt, because the poisons which normally are destroyed and eliminated in the liver have been retained in the blood. There is an afflux of excrementitious matters toward the kidneys, whose secreting elements are irritated and disorganized in their turn. Moreover, to this alteration of the cells of the kidney by soluble poisons, is added the direct action of micro-organisms brought by the blood and arrested in the renal parenchyma under the form of capillary emboli. Thus the last channel of excretion is blocked; the auto-intoxication is aggravated, and the patient rapidly succumbs.

I am going now to inquire as to the place which this case, that I have just been speaking about, occupies in the series of biliary infections. This will lead me, by a natural transition, to the pathological history of our second patient. But this subject must be reserved for another lecture.

Paris, France.

OZONE FROM A PHYSIOLOGICAL AND THERAPEUTIC POINT OF VIEW.

BY MESSRS. LABBÉ AND OUDIN.*

Heretofore, in order to obtain the biological properties of ozone, animals have been shut up in closed receptacles traversed by a current of ozonized oxygen, prepared chemically, or by the action of electricity on oxygen. This *modus operandi* is unfavorable, and has given rise to the opinion the respiration of ozone is dangerous.

Prepared chemically, ozone is impure and mixed with toxic compounds—phosphorous acid, for example. If it be prepared with pure oxygen, considerable quantities are obtained which, mixed with oxygen non-transformed, constitute a compound dangerous to respire, especially in an enclosed space. The results are absolutely different if we obtain the conditions approaching those of the habitual production of ozone, that is by causing animals to respire a mixture of atmospheric air and ozone; in the latter cases accidents are never observed.

Messrs. Labbé and Oudin have prepared ozone by passing a current of air through two concentric tubes 3 to 4 millimetres apart, the intervening space being traversed by electric sparks. To obtain a sufficient quantity of ozone, they take the interior tube, sealed, and containing the rarefied air, which acts as a perfect conductor and is perfectly applied to the surface of the dielectric, which is the glass. The other armature of this form of condensor is constituted by a metallic sheet applied to the internal face of the external tube, and it is between this metallic sheet and the surface of the internal tube that are formed the sparks engendering the ozone. The slightest elevation of temperature which is produced in the cylindrical space separating the two tubes, is sufficient to produce a current of air, ascending and bearing along the oxygen formed. Under the circumstances, the air does not contain more than 11 to

* Translated for *Medical Age*, by Joseph Helfman, Detroit, Mich.

12 hundredths of a milligramme of ozone per litre, which the authors called the therapeutic dose. In subjecting animals and themselves to inhalations of air ozonized in these proportions, the quantity of ozone respired in about a quarter hour is 2 milligrammes—a dose hitherto reputed dangerous, and yet inhalations continued for several hours under the foregoing circumstances have produced no disquieting symptom. Convinced of the absolute innocuousness of these inhalations, Messrs. Labbé and Oudin have experimented with cachectic patients and even with children of tender years.

It is known that the quantity of oxyhæmoglobin contained in the blood is 13 to 14 per cent. If a subject whose blood contains only 10 to 11 per cent. of oxyhæmoglobin (which is the ruling proportion with city people), be subjected to inhalations of ozonized air, an augmentation of 1 per cent. will be found at the end of a quarter hour. This increase persists only for 12 to 24 hours, if the patient takes no more inhalations, but, if they be renewed every day, the quantity of oxyhæmoglobin continues to augment little by little until it reaches the physiological figure.

We know also that ozone is a powerful germicide, capable of arresting most advanced fermentation, even in small doses. On the other hand, the tubercular bacillus is gifted with the greatest resisting power to antiseptics. Will ozone act on this bacillus as on so many others? This is what Messrs. Labbé and Oudin have sought to determine.

For this purpose they have instituted the following experiments with the coöperation of M. Veillon: They took a culture of tubercular bacilli, on peptonized gelatin, which they divided into four tubes. Two of these tubes were traversed during two hours by a current of ozonized air, furnished by the apparatus above described, and the cultures were inoculated into Guinea pigs which are yet living, fifty days after inoculation. The other tubes, non-ozonized and preserved as witnesses, were inoculated into Guinea pigs which succumbed after 25 days. Without attributing to this experiment more importance than it merits, the authors consider it interesting and encouraging.

A CASE OF REMITTENT FEVER OF UNUSUAL DURATION AND SEVERITY.

BY DR. H. T. WHITNEY.

In November, Mr. ——, a robust and powerful Englishman, who has spent fifteen years in China, left Amoy for Shanghai (a low level section of country 31° 12′ 30″ N., 121° 28′ 55″ E.). From here he took a house-boat and started on a shooting excursion. After journeying twelve days, the boat was moored one night in a creek surrounded by swampy, flat land. The next morning he felt feverish, but, thinking it unimportant, remained in the boat several days longer before returning to Shanghai, where, finding his symptoms still continued, he returned at once to Amoy.

On the ninth day of the fever the afternoon temperature was 101° F.; skin hot and dry; no headache, and not much distress. He was confined to the house and treated with quinine, and on the twelfth day of the fever (Dec. 16th) the temperature became normal, but rose again the same night to 101° F.

A variable high temperature persisted, with but few intermissions, for 68 days, during which time it had twice risen above 105°. Slight wandering and incoherence were noted on a few occasions, but as a rule, even with the highest temperatures, the brain was perfectly clear. There was subsequently a daily fall below normal for a fortnight, after which the patient became convalescent. The case was diagnosed by three physicians as one of malarial remittent fever.

Remarks.—There are several points of interest in this case. The extraordinary duration of the fever, the long-sustained high temperature, and the subsequent complete recovery, are to be noted. Several times sudden rises of 5° or 6° took place in a few hours; and though they occurred more or less periodically, the intervals were not sufficiently exact to enable these exacerbations to be anticipated with any degree of certainty, although an effort was made in this direction.

The treatment chiefly relied on was quinine and arsenic, alternately and in combination. When an unusually high temperature was found to be clearly on the decline, a 20-grain dose of quinine was given, and repeat-

ed if depression was not too great. Some complications made it necessary to be extremely cautious in the giving of drugs. For example, at an early stage of the disease the heart was found to be very weak, though no organic disease could be discovered. A short trial of digitalis was made, but produced no marked benefit. Sometimes a systolic murmur could be heard at the apex, and after the temperature had been very high the pulse would become irregular and intermittent, and often so feeble as to be quite uncountable.

The patient was nursed and watched constantly night and day by thoroughly reliable and intelligent friends, who carried out all instructions most minutely, and met such conditions as that just mentioned by the judicious administration of stimulants and nourishment in small and repeated quantities. But for this, and if the patient had been left to himself at night, it is quite probable recovery would have been impossible.

A considerable amount of œdema of the lungs existed, also an elongated and irritable condition of the uvula, which produced a distressing and troublesome cough. A portion of the uvula was removed, which gave some relief, though not complete, owing to the accumulation of mucous in the bronchial tubes. The bowels were sometimes constipated, and much flatulence of the stomach and intestines, which caused great discomfort and rendered the pulse irregular and intermittent. Great relief was obtained by a purge of calomel, rhubarb and ginger. So sudden on some occasions was the change in the action of the heart, that a professional friend, while watching the case with me one day, expressed surprise at finding the pulse irregular and intermittent which I had pronounced regular five minutes before.

We observed later on that moving the patient on to his right side would often steady the pulse, which was irregular and intermittent while lying on his left side. Toward the end of January some pain in defæcation was complained of, and on examination a fissure of the anus was found to exist. This probably was the cause of a gland in the groin becoming inflamed; the small abscess resulting, however, was opened and soon healed, as did also the fissure without operation. To add to the patient's sufferings, about this time a bed-sore threatened on the left hip, but was fortunately arrested by frequently bathing the part with whisky and removing pressure as much as possible.

During the last few weeks of the fever considerable œdema of the left foot and leg took place, the cause of which was not very clear. It gradually passed off, however, as the patient grew stronger. As a rule, during this attack no cold stage was noted, except on two or three occasions just previous to a rapid rise of temperature. The first happened on the forty-sixth day; the patient was in bed in the same room as usual, where a fire was carefully maintained day and night, and under precisely similar circumstances to those previously existing. He had taken 20 grains of quinine in the morning, and two 3-minim doses of Fowler's solution during the day. At 7 P.M. he took some boiled fish, toast, and whisky and water, with some enjoyment, as he had done for several days previously, a little appetite having returned with a few days of low temperature. At 8.30 P.M., without warning, he was suddenly seized with a most violent fit of shivering, lasting an hour, and followed by a rise in temperature from 101° before the meal to over 104° at 9.30 P.M. There was also slight bilious vomiting. This was the most marked rigor of all, the others being much shorter and less violent. It is interesting to observe a tendency towards an intermittent type; for instance, on the 12th, 28th, 31st, and 37th days, also more frequently later on. This peculiarity in malarial remittent fever of long duration I have not uncommonly noticed in many cases treated in North Formosa and elsewhere; also that the interval of intermission becomes longer as the fever approaches its termination.

In the treatment of these prolonged cases, especially where the heart's action is feeble and sometimes intermittent, great stress should be laid upon the importance of nursing and constant watching of the patient night and day; otherwise there is danger of the patient dying unobserved. In this case it was a satisfactory feature that, except on a few occasions when the temperature reached a great height and was accompanied by

slight bilious vomiting for a short time afterwards, the stomach retained food. His nourishment consisted chiefly of strong soups, broths, and milk; as a stimulant, whisky was employed and proved most valuable.

Furthermore, the indomitable pluck with which the patient maintained throughout his long and painful illness a hopeful view of his own condition; the persevering and uncomplaining manner in which for many weeks, hour after hour, he swallowed everything put to his lips, and his cheerfulness, even when it was evident his life was hanging by a thread, his voice having sunk to a whisper, his temperature being over 104° and pulse uncountable, were important factors in the prognosis, and elements of the utmost value in leading to the favorable issue.

Amoy, China.

CHLOROFORM AND COCAINE IN NEUROTOMY.

BY JAMES HENDERSON, M.R.C.V.S., EDIN.

The expediency of performing the operation of neurotomy, or, more properly speaking, neurectomy, is still in the minds of some practitioners a method of doubt; but its value as a means of relieving foot lameness will not be considered in the following remarks. Their purpose is only to offer a few observations upon the relative merits of chloroform and cocaine as suitable anæsthetics in the performance of the operation. The writer had the pleasure of assisting at two such operations, both performed by Professor Walley, of Dick's Veterinary College, Edinburgh, in which chloroform was used in one case and cocaine employed in the other; and a description of the essential points of difference on the production of anæsthesia in each will aid us in the consideration of this subject.

In the operation in which chloroform was used, the patient was a small bay mare over twelve years of age. She was suffering from navicular disease. After being cast, chloroform was administered by means of a syringe applied to the nostril. Before any incision was made a linen bandage was rolled tightly on the part, beginning at the hoof and extending upwards to near the knee. The object of this was to remove as much blood as possible from the part to be operated upon, and to retain the effect of it, an elastic tourniquet was then applied three or four inches above the site of the higher operation. The bandage was then removed, the incision made, and the nerve dissected out. About three-quarters of an inch of the plantar nerve was cut out and the wound treated in the ordinary way. When the nerve was bound and manipulated, the mare showed marked signs of sensibility, and when it was cut she started violently. No bad effects followed the use of chloroform in this case.

In the second case the patient was a sorrel mare, slightly larger than the first, aged, and suffering from ring-bone. Before casting, cocaine was injected at the site of the higher operation, by means of a hypodermal syringe. About a drachm of the ten-per-cent. aqueous solution of the hydrochlorate was used. The hæmostatic precautions were the same in both cases, and in each case procured an almost bloodless operation. In the latter case there was some swamping of the tissues with clear fluids, composed probably of lymph and the cocaine solution. The local anæsthesia produced by the cocaine was so complete that, during the dissection of dermal, connective, and nerve tissues, the mare never once quivered. So much was this the case that a little comparative examination was required to distinguish the nerve from the artery.

It is stated by some that the death-rate of horses due to the use of chloroform is five per cent. The dangers to which the patient is exposed by this general anæsthetic are chiefly respiratory and cardiac arrest, and proneness to hæmorrhage induced by the lowering of the tone of blood vessels and their consequent dilatation. The danger of constitutional disturbance from the use of cocaine is practically *nil*. The temporary loss of sensibility in the part may continue for a length of time not exceeding a few hours. One great advantage of cocaine over chloroform, especially in minor operations, lies in the fact that it can be employed where the risk of death by use of chloroform would be excessive, as for instance in cases in which the patient suffers much from heart

disease, or of any chronic affection of the respiratory system, as emphysema, lung consolidation, or roaring. The question resolves itself into one of general *versus* local anæsthesia. It is undeniable that in most major operations general anæsthesia is absolutely necessary, and patients suffering frem serious defects in their circulatory or respiratory systems may on their account be beyond the reach of surgical interference. Still in veterinary practice many operations are undertaken by aid of general anæsthetics which might safely be performed under a local one. The more general use of local anæsthetics should be encouraged because it is the more scientific, that is to say, that if in an operation there is a choice between a local and a general anæsthetic, the former should be chosen every time, because it eliminates from the case the constitutional and surgical risks already pointed out, and also the certainty of lowering the vitality of the patient, which is the physiological sequence of general anæsthesia. Careful observation combined with scientifically conducted experiments, will probably demonstrate that operations hitherto supposed to be impossible, except under a general anæsthetic, will be found to be not only practicable but safe under a local one.

Detroit, Mich.

ON THE TREATMENT OF ULCERS BY HEAT.*

BY DR. A. STÉPANOFF.

The application of heat as a curative agent, despite the labors of several authors, chiefly Russian, has not up to the present time obtained the merited reputation enjoyed by other therapeutic methods. Nevertheless, the physicians who have applied this *local heat* in several cutaneous affections, as well as for the purpose of reaching the deeper-seated organs, are persuaded that by this means results are obtained superior to those following other modes of treatment.

In this study I shall content myself with indicating the rôle of heat, by exhibiting its influence on the cicatrization of different ulcers, syphilitic and simple in origin, seated principally in the legs at the level of the tibia—ulcers which are very refractory to ordinary treatment.

Amongst the therapeutic methods thus far applied to the cure of ulcers, it would be difficult to select a single one which might yield perfectly satisfactory results. This insufficiency of prevailing methods is explained by the reason that to achieve the cicatrization of an ulcer it is necessary to insist upon placing it amidst conditions which, as far as possible, shall be favorable to absolutely regular circulation and nutrition. Only by realizing these physiological conditions can we count upon obtaining immediate regeneration of the tissues and prompt reconstitution of the ulcers.

Since the introduction of Reverdin's method, consisting in transplantation of epidermis upon ulcerated surfaces, the treatment of ulcers has become considerably simplified and more stable. But likewise, in this method, the success of inoculation of particles of cuticle depends principally upon the nutritive state of the tissues composing the ulcer. If the base of the latter is covered with granulations too soft, yielding and anæmic in character, not being perfectly papilliform, it is certain that it will be vain to expect consolidation of the inoculated particles of skin on the ulcerous surface.

Thiersch obtained the best results when he began to practice complete curetting of the granulations of the ulcer, and to place the pieces of cuticle on the denuded base. Recently more advantageous results in the treatment of ulcers have been obtained by methods based chiefly on reconstitution of the circulation and nutrition of the tissues composing the ulcer.

Thus, Moras has proposed the treatment of varicose ulcers by applying tin fascia and covering them successively by an antiseptic bandage. This species of bandage, which presents all the qualities of a heating compress, produces cures of the ulcers in the course of five to six weeks.

Günther favors nutrition of the ulcerous region by the aid of massage of the edges of the ulcer, kneading each one with the finger, and causing them to flatten by the use of a small hammer. This massage being accomplished, he applies to it a heating compress.

To my knowledge, up to the present time,

* Translated by Joseph Helfman, Detroit.

no author has had recourse, in the treatment of ulcers, to localized heat, the latter permitting us to establish more advantageously than other therapeutic agents the destroyed circulation, and to augment the nutrition of the tissues.

Respecting the action of heat as an agent capable of stimulating the metamorphosis of different inflammatory processes, several Russian authors (Cussas, Nossiloff, Gouriyne) have published their researches, this treatment with the aid of localized heat giving them better results than those following the application of other remedies.

Possessing various data concerning the favorable action of localized heat on different inflammatory processes, I have profited by them thus to treat syphilitic ulcers as well as simple and chronic ulcers which were not susceptible to any other treatment. I made my observations at the Hospital Kalinkine at St. Petersburg, where there is a considerable number of syphilitic women, and of women bearing simple cutaneous lesions as well as ulcers.

The most commodious form for applying this heat locally is afforded by rubber sacks filled with hot water, which are applied to the affected spot. First in order to obviate irritation, I applied to the ulcer a compress immersed in boracic acid solution (3:100),covering it by a sack of hot water. Every hour or hour and a half it is necessary to replace the sack containing the cooled water, with one filled with water as hot as the patient can endure it. Calefaction of the ulcerous focus is continued generally for eight or nine hours. The results from this mode of treatment are as follows: First of all, the influence of the heat on the subjective sensations are observed. After several hours, the pain and the tension produced by the ulcer diminish considerably. In the course of several days these pains disappear completely without returning, even if the application of the bags of hot water be discontinued.

The purification of the ulcer proceeds with extreme rapidity, as also the separation of the gangrenous parts from the healthy parts. The suppuration, in place of augmenting, as some authors affirm, diminishes, and the ulcers become covered with normal granulations, in the peripheric zone of which the cicatrice soon appears.

If the ulcer at the beginning presents callous edges, these, after the application of the bag of hot water, become soft and form a layer of thin epiderm, which, progressing gradually, at last covers the entire ulceration.

The course of ulcerous process under the influence of heat constantly applied is considerably abbreviated in comparison with other therapeutic methods. With certain of my patients, ulcers which had resisted varied treatment for several years were completely cured by the simple application of local heat, without recourse to any other therapeutic agent.

It is necessary to note here that the heat acts favorably not only upon various ulcers, but also in other inflammatory conditions of the bones and articulations (Nossiloff, Gouriyne, etc.).

It is evident that in the hospitals where there is a large number of patients this mode of treatment should be pursued systematically. Hence, a special apparatus should be constructed for heating water to a definite and exact temperature, distributing it by means of tubes amongst the various patients.

The first case here described in detail is that of a peasant woman, 39 years old, bearing an ulcer in the right tibial region. Treatment begun on the 12th of December effected the complete cure by the 13th of January.

The second was that of a washerwoman of 57. Ulcer on the right side of the tibia, six centimetres in diameter, extremely painful. No evidence of syphilis. Treatment, beginning Oct. 6th, terminated successfully Nov. 7th.

Case 3.—Washerwoman, 33 years. Entered hospital Nov. 2d, 1890. Two voluminous ulcers, 5 cm. in diameter, on both tibia; no relief from previous treatment during the preceding three years. Hot water treatment applied, and complete cure effected in *a month and ten days.*

From all my observations, I draw the following conclusions:

1. Heat applied to the local treatment of cutaneous affections, as also to those of a deeper-seated nature, should prevail in prominence of position over other methods of treatment.

2. All ulcers, whether syphilitic or not in origin, uniformly give way to this caloric treatment.

3. The favorable action of heat is due particularly to the regularization of the circulatory phenomena, and of the nutrition of the affected tissues.

4. Under the influence of heat, the sanguineous stasis rapidly disappears, as it is observed to form in the vicinity of the inflammatory focus.

5. Heat exercises indubitably an attenuating influence upon the pains produced by the inflammatory process of the ulcer and of the subadjacent tissue.

6. The caloric treatment gives good results only when applied seven to eight hours daily.

7. This treatment, in the form of rubber bags filled with hot water, is preferable to the other sources of heat—poultices, compresses, etc.

8. The application of heat in the hospitals should be regularly organized, that a great number of patients may profit by it.

9. The prolonged application of heat to the skin causes no irritation, if certain measures be taken to prevent it.

10. The caloric treatment presents two advantages, to wit: *a*. The duration of the patient's confinement to the hospital is considerably reduced; *b*. The pecuniary expense is thus notably diminished.

St. Petersburg.

INCENDIARISM COMMITTED UNDER THE INFLUENCE OF HYPNOTIC SUGGESTION.

BY DR. AUGUSTE VOISIN.*

I purpose to treat of a theme which now more than ever is in the order of the day. I refer to hypnotic suggestion. And in particular I shall discuss the following question:

"Can an individual really commit a misdemeanor or crime under the influence of hypnotic suggestion?"

This subject is interesting from a double point of view: First, from the scientific; second, the medico-legal. I need not insist on the gravity of the conclusions to be arrived at in this regard.

The recent and numerous studies in connection with this subject, the wide publicity of a trial still fresh in our memory, the experiments which I myself have repeated many times of late years,—all these prompt me to recur to this question, so generally disputed and so difficult to solve.

I shall not enter into a disquisition upon the multiple doctrines which are accumulating each day, and serve only to complicate the problem. To discuss, to make hypotheses, to support a theory more or less probable—all this is well, assuredly; but but in the presence of phenomena so subtle, in the presence of facts which enter deeper into the arduous domain of psychology, than into that of physiology, what above all is necessary is calm, serious and impartial observation. Before knowing *why* things are thus, let us first see *how* they are; and if we are not rewarded by a solution of the problem, we shall at least be able to state it clearly, which, as already said, is none too easy a task.

As my readers are doubtless aware, two schools stand in formal opposition.

The school of the Salpêtrière, created by Prof. Charcot, and sustained by his numerous pupils, declare there is no proof whatever that an individual can commit a crime or true misdemeanor under the influence of hypnotic suggestion.

Prof. Brouardel and M. Delbeuf affirm that the abolition of moral liberty is only fictitious; that the subject considers the value and gravity of the act suggested; that he remains master of himself to accomplish it or resist, at his pleasure; in a word, that, despite appearance, he is his own master; his responsibility is entire.

"A hypnotizer," says Prof. Brouardel, "may persuade a patient, who has been long under treatment, that a piece of wood is a poniard; he may drag himself towards an attendant for the purpose of killing the latter; but he can do nothing more. The patient at the moment of accomplishing the act will fall into catalepsy or convulsions."

The School of Nancy, on the other hand, represented by MM. Bernheim, Beaucis, and Bérillon, answer the question in the affirmative—"Yes! An individual can commit a crime or misdemeanor under the influence of hypnotic suggestion."

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For my own part, though a pupil of Charcot's, I share the opinion of the School of Nancy, and believe sincerely in its correctness. But I wish to advance nothing without proof, and, first of all, I must state the facts.

I must accordingly state, in all frankness, that the case presents arguments on both sides; and so I must admit, under certain circumstances, that subjects, in accomplishing the act suggested, seem to have lost all memory of the act accomplished, and all idea of its criminality; others, on the contrary, seem to be conscious, in a certain measure, of the action suggested and the gravity of the crime. Here are two instances, taken from the experience of the same subject:

Three years ago, in the presence of three magistrates of high rank, I caused a woman to commit the following act:

On a bed, a mannikin, wrapped in a dress, provided with a bonnet, represented in almost perfect imitation a woman asleep. I suggested to my subject, during the slumber provoked, that on awakening she seize a real dagger placed on a table, and strike the recumbent woman; besides, I gave her strict orders not to reveal to anyone the action she was about to commit, and, especially, not to reveal it was I who commanded.

On awakening she went quickly to the table, rapidly approached the bed, and struck the recumbent figure a severe blow with the knife. She waited a moment, then returned to her place.

All this transpired while I, with three assistants, was concealed behind a curtain, awaiting anxiously the result of this test. The act accomplished, we emerged from concealment, and interrogated the patient. "What have you just done?" "Have you not committed a crime?" Have you not just killed a woman?" To all our questions she answered "No," with assurance; she did not even know what we meant; she had done nothing, and did not understand our allusion to a crime. And when we persisted in inquiring whether she had not obeyed an order, whether she had not been pushed by some one to the commission of this crime, she still continued her energetic denials and pretended to understand nothing that was told her.

However, at the end of three days, I saw my subject again; she was sad, sombre, visage pale, the features drawn as from great grief or long watching. Anxious, almost trembling, she recited her woes:

"For three nights," she said, "I have not slept; I have frightful nightmares; I seem to see a woman pursuing me in my dreams and accusing me of having assassinated her. I cannot rid myself of this horrible apparition."

Under such conditions, I provoked a second hypnotic slumber, and inquired whether it was true she had assassinated a woman and who had incited her to the crime. She replied, that in truth she had committed the deed, and I myself was the instigator thereof. I then informed her in order to relieve her troubles, that the entire affair was only a pleasantry; that the woman she had struck was only a large mannikin; and that henceforth her nights would be calm, without nightmares or visions of a murdered woman.

This came true. Her features became tranquil and she courageously resumed her occupation, passing peaceful nights without terrifying visions.

What may we infer from this experiment? That subjects who accomplish by suggestion criminal acts, may preserve, in a certain measure, consciousness of the act accomplished, of the act itself, and of its gravity that they may be haunted and suffer cruelly, thus attracting attention and denouncing themselves by their own behavior.

On the other hand, a second experiment made with the same woman may demonstrate diametrically the opposite of the proposition.

Before the same witnesses, I again put this woman to sleep, and suggested on awakening she set fire to a pile of planks arranged for the purpose in the midst of a garden. I gave her a box of matches, and indicated the path she must follow—a path very long and intricate. On awakening, without the slightest hesitation she arose, proceeded to the place, struck a match, and set fire to the planks, which were at once ignited; she then returned to her seat in the most tranquil manner.

I then asked whether she had left the hall. "No," she replied, "I have not stirred."

"Have you not set fire to those planks?"

"I don't know what you mean; I have not stirred hence."

Thereupon, I once more put her to sleep, when she replied freely: "Yes, I started the fire, and I did it because you directed me to do so."

I saw this woman again during several succeeding days, and interrogated her each time; but she had no recollection whatever of the petty incendiarism, and responded to all queries: "I do not understand at all what you mean; I never set fire to anything."

What, then, are we to conclude? The very opposite of our first proposition. It *is* possible to produce a realization of criminal suggestions in a manner, unconscious and irresistible, without the subject preserving any recollection of the act committed. This is a remarkable and important fact, since its consequences are dangerous.

This same crime of incendiarism I have been able to reproduce in fact under other conditions, more dangerous and more closely approaching reality. During provoked sleep, I suggested to this woman that she go, two days later (mark the length of the interval) to a certain court in a distant quarter of Paris, and set fire to a heap of paper. For this purpose I slipped into her pocket a piece of tinder and some matches. I strongly commanded her to avow to no one what she was going to do, and not to say who ordered the act.

On the stated day she presented herself with a letter addressed in my hand-writing, which she was to deliver to the domestic of one of my friends, whom I had not forewarned, but whom my letter apprised of what this woman was to execute whilst the domestic delivered the missive.

My friend not being at home, the domestic did not deliver the letter, but retained it. My patient seemed much put out by this disappointment, and returned home—about three miles distant.

After having breakfasted, she returned to my friend's, but perceiving two policemen, who seemed to her to be on guard, she went away and did not again return.

Ten days after she came to La Salpêtrière, and reported what I had learned from my friend—the failure of her attempt—and returned me the tinder and box of matches.

I put her to sleep, and made the same suggestion. I wrapped the tinder in newspaper, and enjoined upon her to repair to the same address three days later, at one o'clock.

This time I took care to forewarn my friend of the day and hour, and to give detailed orders to my patient to start the fire with a slow match amongst papers placed at the back of the courtyard to the right along the wall of the kitchen.

On the given day and at the precise hour, in the same distant house which I had indicated, the residents saw this woman enter, proceed straightway to the bag of paper, light a match with the utmost coolness, and then hasten away, leaving the spectators overcome with amazement at the sight of this strange crime.

I saw her again fifteen days later and questioned her sharply, but she denied all she had done. There was no disquietude, and no remorse.

Is not this enough to prove the performance of criminal acts may be caused by suggestion, without the subject being conscious of the gravity of the act, or able to betray who gave the command?

It was clearly a crime. The house would have been consumed, and with it, the women and children living in it. But my patient remembered nothing, and had no consciousness of a crime which, in accordance with my command, she had attempted to commit. Only during hypnosis did she describe the scene.

But I will give further and much more striking proof, the patient being the same who performed the two incendiary acts narrated. She is an old acquaintance of mine, as she entered La Salpêtrière, December 4th, 1885. The following is her history in brief, as published in the Bulletin Général de Thérapeutique (April 15th, 1886):

She comes of a tuberculous family; her mother and one sister died of pulmonary phthisis; but no trace of mental alienation is to be found in any other member of her family.

Her infancy and early childhood passed without notable accidents. In 1875, for the

first time, she had nervous seizures, and since these have recurred twice a year.

About November, 1885, the mental disturbances began, consisting in ideas of persecution. She suspected her husband and brother of a desire to poison her, hence refused all nourishment. Debilitated by this long fast, she suffered besides from attacks of hysteria, growing more and more frequent. Her delirium became more pronounced; she would strangle her children. Then supervened ideas of suicide, which she attempted by laudanum—and later by throwing herself from a window. Her husband, observing the persistent character of her ailment, decided to place her in Sainte-Anne (Nov. 10th, 1885), whence she was sent to La Salpêtrière (Dec. 4th).

Examination made at her entrance, revealed the existence of an ovarian point very pronounced on the left, and very sensitive to pressure. Absolute hemi-anæsthesia of the entire left side of the face and body. No sense of odor from the left; no sense of taste in both sides of the tongue. Whilst the right eye saw objects and colors clearly, the left saw badly—failed to count bodies and confused colors, yellow being taken for red, green for white, and blue for green. Aside from some buzzing in the ears, the sense of hearing was well preserved. No disturbance of motility.

The mental condition was not good. The patient at night was beset by terrifying dreams—armed men threatened her. During the day, she was melancholic and depressed; she often repeated a wish to die, and asked for poison.

In the face of such conditions, I determined to essay the hypnotico-suggestive method, from which I had already derived much success.

On Dec. 10th, by causing her to concentrate her gaze on my finger, I succeeded in inducing sleep, but, at the end of several minutes, she awoke suddenly with an attack of hysteria.

On the 16th, another *seánce*, in which I suggested her not to see any longer the men who alarmed her, and to recognize colors with the left eye. Several minutes later, she had a hysterical attack, of short duration, but followed by terrifying hallucinations of vision, during which consciousness was completely suspended.

She was then subjected to the influence of the magnesium lamp, when she relapsed into somnambulic slumber, and I ordered her to come into my study at half-past eleven, on awaking. She entered at the precise moment, when it was discovered she could readily recognize orange yellow with the left eye, which before had always been mistaken; moreover, she had no more hallucinations. During the day she had a new attack of hysteria, but on the following day was calm.

During the succeeding period I renewed the hypnotic treatment, and suggested she have no more attacks; that she dismiss her ideas of poisoning and become cheerful and active.

Gradually, I observed a change of aspect, and by multiplying the suggestions, her dejection, her ideas of suicide, her dyschromatopsia, and even her hemi-anæsthesia, were successively dispelled.

The attacks likewise soon yielded to suggestion; she fell asleep easily, and in the somnambulic state became very suggestible; thus it was possible to cause her to perform acts such as sweeping a room, knitting, etc., and all with imaginary objects. During sleep she might be alternately deprived of, or endowed with, sensibility in one or several members, or throughout the surface of the body, by commanding her to feel or not to feel at such or such a point.

In view of the improvement, I permitted her to return to her husband for eight days. During this interval she remained at home without giving any sign of mental trouble. I then renewed her leave every eight days, putting her to sleep each time and suggesting she continue well. She was dismissed February 15th, 1886.

Since I continued to see her from time to time. The cure persisted, though she still suffers at times from disturbance of perception of color in the left eye, which is easily dispelled by hypnotism. There is no hallucination, no delirium, no confusion of ideas, no hysteria.

Let me now call attention to her presence at a recent lecture delivered by me. This alone was a curious and interesting circumstance. I had not seen her since the 24th of February last (1891). On that day, not having seen her for a long time, I was surprised to encounter her at La Saltpêtrière. When I inquired the reason of her visit, she answered she did not know, but on awaking that morning the idea of coming had occurred. I then put her to sleep, and putting the same question she replied that six months before I had suggested during a hypnotic slumber she come on February 24th. And this was true! I had completely forgotten it, but my suggestion had remained graven on her mind, and on the given date, at the precise hour,

it manifested itself undeniably. For the same reason I found her on the morning I was to deliver the lecture, for at her last visit I suggested that she come on the day of opening of the course.

At this lecture, the patient was interrogated by myself and others as follows:

MR. VOISIN: Good day, madam; what brings you to La Salpêtière to-day?

PATIENT: Nothing; an idea—this morning I said to myself, I must go see M. Voisin.

Mr. V.: But have you a reason for coming.

Patient: No, sir.

Mr. V.: Did I tell you to come?

Patient: No, sir.

Mr. V.: Did you make up your mind long ago to come?

Patient: No, sir; it was only this morning. I arose an hour earlier; I told my husband I was going to La Salpêtrère, and came.

Mr. V.: So no one told you to come?

Patient: No, sir; no one.

Mr. V.: 'Tis well; withdraw a moment.

This day, after a lapse of a month, for the first time, my suggestion of February 24th manifested itself, and like a punctual morning-call, it prompted the subject to leave her bed early enough to come to the given place at the stated time.

I next proceeded to further test, by announcing I proposed to cause this woman to commit, in the presence of my audience, the crime of incendiarism. In the garden adjoining our hall, the Director of our Hospital erected two small woodsheds, tarred on the inside and filled with very dry kindling; one painted red, the other blue. I announced I would put the patient to sleep and suggest she set fire to one of these huts, to be designated by the audience. On her return, I would also ask some of the audience to interrogate her respecting what she had done.

The blue hut was designated. The patient was introduced again, and I put her to sleep by pressing her eyes; then addressed myself to her as follows:

"You will leave this hall, then enter the garden. You will follow a narrow lane until you reach the foot of a hillock, there you will see a little hut painted blue. Some kindling projects from an opening. Set fire to it with the matches which you will strike against the roof. You will then return, and remember nothing; especially, must you tell no one that it was I who directed you to go there and fire the hut."

The woman was awakened, rose at once, followed exactly the road indicated, passed through the doors, up the lane and reached the hillock. Arriving near the small sheds, she did not hesitate, but proceeded to the blue one, struck a match, ignited the kindling, and when all was in flame, returned at the same gait, calm and tranquil, and seated herself in her place. Her countenance bore an expression of the most perfect serenity.

One of the assistants, M. Berillon, then approached and interrogated her:—

Mr. B.: Whence do you come?

Patient: Nowhere; I have not stirred hence.

Mr. B.: You have been seen to leave the room and go toward the garden.

Patient: It is not true, sir.

Mr. B.: Yes, it is true, and it was you. You were seen; and besides, it seems you have just done a very serious thing; you have started this fire.

Patient: That is not true.

Mr. B.: It is true, you were seen; and you know you are going to be arrested; you have just committed a very serious crime; the fire consumed several houses, and several persons are dead—all through your fault.

Patient: No, sir; I don't know what you mean; it was assuredly not I.

Mr. B.: It seems too that you acted on the prompting of someone slse.

Patient: That is not true, sir.

Mr. B.: Was it not M. Voisin who directed you to commit this crime?

Patient: No sir, I have committed no crime and M. Voisin told me nothing.

Thus, it will be observed, she was not only ignorant of what she had done, but had completely forgotten she acted at my desire. I again put her to sleep when she responded as follows:—

M. Voisin: Tell me, did you set fire to the shed?

Patient: Yes, sir.

M. Voisin: Who told you to start the fire?

Patient: You yourself, sir.

This, I think, should be accepted as striking proof that the action of suggestion in possibly causing the commission of crime, cannot be denied.

Without my prompting this poor woman

would never have thought of an act of incendiarism. But I ordered it and she did it irresistibly! Moreover, she would never have confessed she acted on my commands. In a court of justice she would indubitably be convicted, for all the proofs would be against her, though, she would be altogether innocent, and I alone the criminal. Here it will be observed is a conclusion pregnant with consequences. What would a judge think? That she who committed the crime must be punished? Or was she only an obedient machine, an unconscious automaton in the skillful hands of a hypnotizer! It seems that our conclusion bears with it, as an inevitable corollary, the definitive invalidity of the judgment.

There remains to us, however, a certain means of recognizing who suggested the crime or misdemeanor, and distinguishing the true criminal from the docile but innocent instrument treacherously employed.

Hypnotize the individual who committed the criminal act or dereliction; interrogate him or her, and the truth will be revealed by the liberated conscience; he or she will confess all, and reveal the name of the one who instigated the evil.

This is the corrective within reach of the judge for the protection of society and of the innocent. In this manner I was recently enabled to obtain the acquittal of a woman detained at the prison Saint-Lazare for theft.

This unhappy creature had stolen from a number of shops an immense quantity of things. A moving-van would scarcely have sufficed to transport them. She was to be condemned. The examination, however, revealed she had been for more than three months under the influence of hypnotic suggestions, made by individuals who had thus been enabled to impose upon her. The unhappy subject, who had, moreover, become very skillful in this wretched occupation, was only the instrument of the scoundrels.

I conclude by recapitulating my conclusions:

An individual can, under the influence of hypnotic suggestion, commit a misdemeanor or crime.

The judge possesses in this same hypnotism the means of detecting the true criminal; he will be able to distinguish the evil instigating spirit, which counsels and directs, from the innocent hand which strikes unwittingly.

Paris, France.

Correspondence.

PARIS LETTER.

Paris, Sept. 15th, 1891.

TREATMENT OF TYPHOID FEVER.

Dr. Smakovsky, of Russia, having made careful experiments with 700 cases of this disease, recommends the following treatment as the best and most efficacious.

He gives the patient every hour 5 centigrammes of calomel, rubbed up with sugar. This he continues until copious greenish stools are produced. In the meantime the patient gargles the mouth with a solution of chlorate of potash in order to guard against salivation.

After a day's interval the treatment may be repeated. The Doctor claims that this mode of procedure frequently aborts the disease, even in the graver forms. If this does not occur, it has a most favorable action, abridging the course of the disease and rendering it mild and free from complications.

In the interval between two calomel treatments and during the latter course of the disease, the following should be taken:

Bismuth sub-nitrate..	15	centigrammes.
Pure naphthalin.....	.025	"
Sulphate of quinine...	10	"

Mix and make one powder.

Sig. Take four powders a day.

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A SHAMEFUL CASE.

A writer in one of the Paris journals gives the details of a remarkable case of morphomania. An unprincipled husband wishing to obtain grounds for a divorce from his wife, deliberately goes to work and with fiendish ingenuity finds means to get her into the habit of taking morphine, so that she finally becomes a hopeless victim to the terrible drug.

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PARALYSIS OF THE BLADDER.

The bladder should be emptied at regular intervals by means of a catheter, care being taken to perform the operation slowly, and with antiseptic precautions. Strychnine should be given internally and ergotin ad-

ministered by the hypodermatic method; cold douches to the perineum and inside of the thighs as well as general hydrotherapy, and finally electricity. Moderately strong currents should be used, the positive pole being applied to the spinal column or the perineum, and the negative pole to the hypogastric region. The treatment should not exceed ten minutes at a *séance*. If this method does not suffice, then the internal method should be used by means of the metal ball electrode of Guyon, which is attached to the positive pole and introduced into the bladder, the negative pole being applied to the suprapubic region.

In this case the current should be weak, not more than half as strong as in the external method, and the treatment only last from three to four minutes.

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A striking example of the evils which may result from a military despotism, such as exists all over Europe, was lately brought to light. A physician in charge of a hospital near Frankfort was condemned, not long ago, to six months in prison for the outrageous treatment of patients. It appeared, from the report of the trial, that he always carried a rubber whip when he made his visits to the wards. With this he would chastise the patients in bed, and even went so far as to tie them to the bedstead in order to apply it to the soles of their feet.

At the trial he declared that these procedures had a genuine therapeutic value in certain cases. An absurd statement, which did not save him from the punishment he so richly deserved.

IN MEMORIAM.

At the August meeting of the Detroit Gynæcological Society Dr. Jenks announced the sad tidings of the death of our honored Corresponding Fellow, Dr. George A. Tye, of Chatham, Ont.

Dr. Imrie appointed a committee to draw up suitable resolutions upon the death of Dr. Tye.

At the September meeting the following resolutions were offered and adopted:

WHEREAS, This Society has learned of the recent death of Dr. George A. Tye, of Chatham, Ontario, one of its distinguished Corresponding Fellows, who has met with us on several occasions and has furnished valuable contributions to our transactions, we desire not only to pay a tribute to his memory, but to express as far as possible our appreciation of his many sterling qualities as a man, and the enviable distinction he had attained as a physician and surgeon.

Resolved, That we deeply deplore his loss to the profession he had so long adorned.

Resolved, That we recognized in the character of Dr. Tye the attributes of the accomplished physician and valued friend.

Resolved, That the family and friends of our late brother have our heartfelt sympathy in their bereavement.

Resolved, That a copy of this preamble and the accompanying resolutions be forwarded to the family of our deceased brother and for publication to the medical journals of Ontario and Detroit.

E. W. JENKS, M.D.
H. A. GERRY, M.D.

After the reading of the resolutions, an eloquent and touching tribute was paid to Dr. Tye as a friend, a physician, and a Fellow of this Society.

(Signed) H. A. GERRY,

84 Lafayette Ave.,
Detroit, Mich., Sept. 18th, 1891.

SUCCESSFUL TREATMENT OF MENINGITIS.

Editor MEDICAL AGE:

I have been much interested, and think your readers may be, in the cases of cerebral meningitis reported by Dr. J. Bar in the Therapeutic Gazette. Of thirteen cases, only one died.

Dr. Bar's plan is to exclude the patient from everything which can excite the nerves, placing him upon a water mattress, shaving the head and covering it with an ice bag, blistering the nape of the neck and giving him calomel in purgative doses, while reducing the diet to milk, bread and butter. These measures are certainly very simple and rational. If they are not curative they can scarcely be injurious when the case is unmistakably one of brain meningitis.

If the diagnosis of these cases be unquestionably correct, the results of the treatment are most remarkable, for in most hands recoveries from cerebral meningitis are by no means so frequent as in Dr. Bar's.

J. H. S.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., OCT. 10, 1891.

Editorial.

THE PROGRESS AND PROSPECTS OF THE MEDICAL LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

A paper on "The Conditions and Prospects of the Library of the Surgeon-General's Office, and Its Index Catalogue," was read by Dr. John S. Billings before the Association of American Physicians at Washington, Sept. 25th, 1891.

In this paper its author answers many of the queries that are often referred to him by physicians interested in this magnificent collection of medical literature, and we commend its careful perusal to all scholarly physicians who appreciate the value of having at their command the resources afforded by so varied and complete a record of the history of medical progress, and the latest theories, opinions, and established facts concerning the modern treatment of human ailments and the prevention of disease.

As indicative of the extent of this great library, we may quote from Dr. Billings' paper the following statistics:

It now contains 102,000 volumes and 152,000 pamphlets, counting as pamphlets all octavos and smaller sizes having less than 100 pages, and all quartos of less than 50 pages. During the last five years, *i. e.*, from July 1st, 1886, to June 30th, 1891, the additions to it have included 25,237 volumes and 55,900 pamphlets, or an average of 5,000 volumes and 11,000 pamphlets yearly. Of this annual increase, about 2,000 volumes and 4,000 pamphlets have been of new or current literature, and the remainder have been publications of previous years or centuries. About one-fifth of these accessions, of both new and old literature, have been presented; the remainder have been purchased. So far as mere size goes, it is the largest collection of medical literature in the world, and for the last five years has been increasing more rapidly than any other similar library containing 25,000 volumes and upward. It is especially rich in medical periodicals and transactions of societies, of which classes it now contains about 34,350 volumes. The American, English, French, and German literature in all branches of medicine that has appeared during the present century is very fully represented, and over 90 per cent. of all the medical literature of the world for the last ten years is in the library. The whole is conveniently arranged in a fireproof building, and is catalogued.

Speaking of its deficiencies Dr. Billings says:

Of medical incunabula, it contains 140 volumes, or about one-eighth of the medical works published prior to 1500. Of the published works of the ancient Greek, Roman, Arabian, and Hebrew medical authors, it has one or more editions of nearly all, but these editions are not in every instance the best. Of the early Spanish and Portuguese medical literature, it has almost nothing; of French medical works of the sixteenth century but little; of French medical theses prior to 1800, very few. Of the English, French, and German medical books of the 16th, 17th, and 18th centuries that are of any importance historically or practically, it has about 75 per cent.; of the Italian, about 50 per cent.; and of the Spanish, about 25 per cent. In its periodical literature it is especially deficient in the Spanish and Italian prior to about 1850, in the French prior to 1780, and in the Russian prior to 1860. If I could add to it about ten thousand volumes of my own selection, it would, I think, contain at least one edition of every medical work of any practical use or importance that has ever been published, although it would still not possess some fifty thousand pamphlets and theses, each of which might be of some historical interest.

These deficiencies in the Library are being gradually supplied, but the acquisition of the older books and pamphlets that are still wanted is becoming every year a slower, more difficult, and more costly process.

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Of the Index-Catalogue of the Library, twelve volumes have now been printed—carrying the work to S. The thirteenth volume

is nearly ready for the press, and the manuscript for the rest of the work—at least two volumes more—has been prepared, but has not yet been finally corrected and arranged. As we can print but one volume a year, it is evident that during the twelve years that have elapsed since the publication was commenced a large number of titles of books and articles received too late to be placed in their proper places must have accumulated, and this accumulation becomes more rapid every year as we get further down the alphabet in the course of printing the work. At present the number of unprinted titles thus accumulated under authors and subjects down to S probably amounts to 70,000 author- and 240,000 subject-titles, the latter of course including the titles of indexed journal articles. If these were now printed they would make about four volumes of the size of the volumes of the Index-Catalogue, and three years hence, when this first series of the Catalogue is finished, there will probably be material on hand sufficient to form at least five volumes of a supplement or second series, which will no doubt expand into six volumes by the time the printing of this second series is finished—that is, if the library continues to increase as it has done for the last four years.

Dr. Billings then discusses the utility of and the maintenance of the Index Medicus, the monthly classified record of the medical literature of the world.

"This, as you know, is in the main a record of the titles of new books and articles in periodicals received at the library, to which are added the titles of a few books advertised as published but not yet received. It is not published by the government, but by Mr. George S. Davis, of Detroit, who pays all expenses connected with it, and is entitled to the thanks of all who use it for his public spirit and enterprise in maintaining its existence, since the amount received by him for subscriptions barely meets the cost of its publication."

***

In conclusion Dr. Billing expresses his belief in the bright future of this great library, which must form a monument to the intelligence of a nation and its medical advisers who have aided in realizing such a grand record of medical history of incalculable benefit to the present age and to posterity.

It is not dependent on the skill or energy or good-will of any one man; it is becoming more and more known to, and more and more used by, the members of the medical profession, and so long as they are interested in it, the necessary appropriations will be made and the skilled force employed to increase, preserve, and catalogue it. The service rendered by a number of those employed in the library is not a mere matter of money—they are deeply interested in their work and proud of the results, and they can and will carry it on and instruct others who will come after them and do likewise. They have to handle much rubbish, for the proportion of what is both new and true is not much greater in medicine than it is in theology, but in a great National collection this is unavoidable, and the best they can do is to make a first rough assortment, and then make the whole accessible to those who wish to use it. There is no doubt that the publication of the Index-Catalogue will be completed, and that a Supplement will speedily follow.

THE CONTAGIOUSNESS OF PHTHISIS.

This question is discussed *pro* and *con*, editorially, in the London Lancet, Sept. 19th. Inasmuch as not a little confusion exists in both the medical and lay mind as to its solution, a *résumé* of opinions gathered by the Lancet may serve to elicit the views of other observers and contribute to the elucidation of this problem, of such grave interest to public health.

The idea that phthisis is contagious is a very old one. More than a hundred years ago the medical faculty of Naples came to the conclusion that in this complaint they had to deal with an infectious disease; consequently, for over sixty years, the most rigid laws were laid down in connection with patients afflicted with this dread disease; they were treated as severely as the lepers of old, driven from their homes and shunned by everyone. A heavy fine was inflicted on any medical man failing to report a case that occurred in his practice. Any room in which a case had died was thoroughly disinfected, all bedding destroyed, and the woodwork

taken out and replaced by new. In spite of these stringent measures, the death-rate from phthisis continues as high as ever.

With Prof. Koch's discovery of the tubercle bacillus, this theory received a fresh impetus, and numerous papers have been written advocating or decrying the treatment of phthisical patients in the same wards as other patients. The fact that a disease is caused by a micro-organism is certainly strong presumptive evidence that it is infectious. A great number of statistics have been collected to show that phthisis may be communicated from person to person living constantly together, such as husband and wife, or in crowded institutions, such as convents. Apparently affirmative results have been produced from the large nursing sisterhoods on the Continent. But much caution must be used, and further investigations made, before the theory of the contagiousness of phthisis can be accepted. Phthisis is most rampant where human beings are crowded together in damp and ill-ventilated dwellings. The hygienic arrangements of many of these convents leave much to be desired; they are greatly overcrowded, and thus the statistics lose much of their value.

Again, experiments by Dr. Heneage Gibbes and others have been made to ascertain whether tubercle bacilli are to be found in the breath of consumptive patients; but these experiments are open to one great source of error—namely, that the color tests for the bacilli only were employed. These tests are obviously unreliable, as, though the bacilli may not be present, their spores may be. Great force has recently been added to this argument by the experiments of Corbet, who found that animals inoculated with dust obtained from rooms in which consumptive patients had been living became tubercular, but the color tests for the bacilli proved negative.

A good *résumé* of this subject is given in a pamphlet not long ago published by Dr. T. J. Mays of Philadelphia. He is most decidedly opposed to the theory that phthisis is contagious. He cites the oft-quoted statistics of the Brompton Hospital, which show that during a period of thirty-six years not a single authenticated case of phthisis arose within its walls amongst its 280 physicians, residents, and nurses of which there existed a health record. Dr. Mays further gives the statistics of the Friedrichshain Hospital in Berlin, which show that out of 989 physicians and nurses only ten became tubercular, and three of these showed evidences of the disease before entering the hospital.

Dr. Brehmer, in his work on the Ætiology of Phthisis, states that at Görbersdorf, where his institution is situated, during the last twenty years more than 10,000 phthisical patients resided in the hospital, who walked the streets of the town and commingled with its inhabitants, and who would, therefore, apparently crowd the air with tubercle bacilli, yet the mortality is 50 per cent. less among the Görbersdorf population than it was before the hospital was established. In dealing with the report of the Collective Investigation reports of the British Medical Association, in regard to the liability of contagion between husband and wife, or between members of the same family, etc., in which 1,078 answers were received—778 being negative, 39 doubtful, and 261 affirmative,—Dr. Mays remarks that the large number of affirmative answers is not to be taken as proof of the contagiousness of this disease, for the aim of the inquiry was not to ascertain the number of absolutely well demonstrated cases in which contagion was present or absent, but to collect the individual opinions of a large number of physicians as to whether they believed the disease to have been contagious in certain cases or not; and he justly asks if we are to assume that the 261 opinions are of more weight than the 778 negative ones. Dr. Mays then quotes the figures of Dr. Schnyder of Switzerland, who gives a record of 844 cases of phthisis occurring among married people. In 445 of these the husband only was phthisical, and in 367 the wife only, while in 32 both husband and wife were affected, showing that in 812 instances there was not the least proof of contagion. Again, Dr. Flint gives the history of 670 cases of phthisis which affected husbands and wives, and among these there were only five in which there was suspicion that the disease might have been contracted from one or the other. M. Leudet shows that out of 112 widows and

widowers whose consorts died of phthisis, only seven became phthisical.

On carefully considering the statistics given above, it is impossible to come to the conclusion from them that the case for the contagiousness of phthisis has clearly been made out; the instances in which transmissibility may be suspected can surely be accounted for as coincidences in a disease so prevalent as phthisis. We are not aware of any reported cases in which infection has been proved in any of the English hospitals for consumption, although the phthisical patients mix freely and sleep in the same wards as other patients. But, although no decided verdict can yet be given, yet in face of the important results obtained by Dr. Corbet it behooves us to lay down the most stringent regulations as regards the disposal of the sputa of phthisical patients; to burn the expectoration daily; to compel the patients to use spittoons containing some disinfectant, and to prevent them from expectorating on to the floor or into handkerchiefs. We would also urge that the walls of the wards, and the beds, should be frequently cleansed, and free and efficient ventilation assured.

A NEW THEORY OF MENSTRUATION.

Fred. Byron Robinson, B. S., M. D., Prof. of Gynæcology in the Post-Graduate Medical School Chicago, contributes to the American Journal of Obstetrics for September a paper presenting some novel and interesting views of the theory of menstruation.

This is in brief that menstruation is governed by nervous ganglia situated in the walls of the Fallopian tubes and uterus. Dr. Robinson designates these nervous symptoms as *automatic menstrual ganglia.*

The proof that is offered in substantiation of this theory is three-fold and based on conclusions reached by analogical reasoning, study of anatomical structure, and by microscopical examination.

We cannot present in detail here the lucid reasoning of Dr. Robinson, from which he reaches his deductions, but merely reproduce a few bold premises which he starts with as a substructure for his theory.

A nervous ganglia is a collection of nerve cells. Its constituents are nerve cells and nerve fibres. It is an ideal nervous centre having a central, conducting, and peripheral apparatus. A ganglion is a little brain, a physiological centre. It has the power of receiving sensation and transmitting motion. It is automatic in itself. It possesses the power of nourishment and controls reaction. Reflex action can be demonstrated in it. What are called motor, sensory, and sympathetic nerve fibres are found in its composition. The peculiar feature of a nervous ganglion is rhythm. It performs cyclical movements. It is a periodical function which continually waxes to a maximum or wanes to a minimum. It lives a rhythm life. Its period of action varies from a few seconds to a month.

The proof of the existence of the ganglia in the tubes and uterus from analogy—all hollow viscera have ganglia in their walls. Histologists have long known that many viscera possess ganglia which have automatic power. The names of Bidder, Schmidt, Ludwig, Remak, Meissner, and Auerbach are associated with the discovery and description of these visceral ganglia.

(*a.*) I have satisfied myself many a time, in vivisection on dogs and other animals, that the heart has nervous centres or ganglia, which will continue to act independently of their cerebro-spinal connection.

(*b.*) A large number of experiments on the intestines of animals (especially of the dog) convinced me distinctly that the intestines are endowed with automatic ganglia in a similar manner to the heart. These ganglia are called the plexus of Auerbach and the plexus of Messsner.

(*c.*) The same statement can be made relative to the bladder. It is supplied with two kinds of nerves. One kind is the cerebro-spinal. The other kind is the sympathetic nerves, which especially go to the body and summit of the bladder. These nerves are studded over with ganglia which may be styled automatic vesicular ganglia.

(*d.*) The analogies of the heart, intestines, and bladder are quite apparent, and can reasonably be carried to the uterus and tubes. They are all hollow organs. The tubes and uterus are no exception to the other abdominal viscera. What is said in this paragraph is the result of examination of over seven

hundred uteri, tubes, and ovaries, of woman, cow, pig, sheep, and dog.

(*e.*) The Fallopian tube is simply a continuation of the muscular walls of the uterus, but not of the endometrium. The endometrium seems to be a temporary gland, whose duration of active life is the menstrual period. The analogy of the hollow tube of the intestine or heart is very close.

The distribution of the sympathetic nerve supply and the spinal nerve supply of the uterus and tubes strengthens the theory of automatic menstrual ganglia.

The microscope, or sometimes a large lens, will demonstrate the existence of the ganglia on the plexus of nerves going to the uterus and the tubes.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

The second triennial meeting of this Congress was held at Washington September 22d to 25th. Its proceedings are now history. The general concensus of opinion seems to be that never before has a congress of physicians and surgeons met which was better organized for earnest work than this.

The meetings of the individual associations and societies were well attended, the papers read for the most part highly practical and to the point, and the discussions participated in brief and pregnant in suggestions—the whole business of the meeting being transacted with unusual despatch.

The officers elected for the ensuing year were:

President, Dr. Phineas S. Connor, of Cincinnati; Vice-Presidents: Dr. L. McLane Tiffany, of Baltimore; Dr. Levi C. Lane, of San Francisco; Secretary, Dr. J. R. Weist, of Richmond, Ind; Recorder, Dr. J. Ewing Mears, of Philadelphia; Treasurer, Dr. John B. Roberts, of Philadelphia; Member of Council, Dr. Claudius H. Mastin, of Mobile.

At the Executive Session the following resolution was adopted:

Resolved, That the Association hereafter hold each triennial meeting at Washington, and that other annual meetings be held at such time and place as the Association may name.

The following were elected to active membership, viz.:

Dr. J. S. Wight, of Brooklyn; Dr. E. W. Walker, of Cincinnati; Dr. Geo. R. Fowler, of Brooklyn.

The honorary members elected were: Mr. John Chiene, of Edinburgh; Mr. Reginald Harrison, of London; Mr. Edward Arthur Durham, of London.

Over four hundred papers were announced to be read, some of which will appear in current journals and all in the Proceedings.

A notable feature of the meeting was the subserviency of its social features to its scientific work,—although it was fruitful of many small gatherings of congenial company. The address of the retiring President, S. Weir Mitchell, M.D., LL.D., "On the History of Instrumental Precision in Medicine," may be regarded as the key-note to the tenor of the proceedings of this association. Brevity, directness, and precision characterized the papers and discussions.

If one is to credit the reports of the press, there was nothing to mar the harmony and satisfactory character of the meeting but the abominably bad water of Washington, which placed many guests on the sick-list and prevented their participation in the pleasures of the intellectual as well as material feasts that were spread.

THE ANNUAL MEETING OF THE DETROIT MEDICAL AND LIBRARY ASSOCIATION.

The annual meeting of the Detroit Medical and Library Association was held the evening of October 5th, at the Association Rooms. The officers chosen for the ensuing year were Dr. George W. Stoner, President; Dr. B. P. Brodie, Vice-President; Dr. Don M. Campbell, Secretary; Dr. Angus McLean, Treasurer; Dr. J. V. Becelaere, Librarian; Dr. George Duffield, Member of the Library Committee; Dr. A. W. Imrie, Member of the Advisory Council; Dr. Walter J. Cree, Member of the Publication Committee; Dr. A. E. Carrier, Member of the Finance Committee.

At the conclusion of the business meeting, the members present adjourned to the residence of Dr. A. E. Carrier, the retiring President, where a dainty banquet awaited them. Dr. E. L. Shurly acted as toast-master, and in so doing quite distinguished himself by his ready flow of wit.

After Dr. Carrier had read his valedictory, the following toasts were listened to with a great deal of enjoyment: "An Eye-Opener," President-elect Stoner; "The Physician, the Man," Dr. F. W. Mann; "Drugs," Carl N. Anderson; "Art in Medicine," John Ward Dunsmore; "The Medical Journal," Dr. Leartus Connor; "Our Friend the Lawyer," Prof. C. B. Nancrede of the State University; "Prophecy," Rev. Lee S. McCollester; "Our Society's Future," Dr. Theodore A. McGraw.

A more delightful entertainment could not be imagined, every one present heartily entering into the spirit of the occasion, and the sallies of wit in both the toast-master's introductions and the respective replies were well worthy of permanent record. Dr. Carrier's retirement from his successful administration of the Society's affairs will long be recalled by his guests with pleasant memories of the hospitality of their host.

MUSIC AS A THERAPEUTIC AGENT.

The London Lancet informs us that Canon Harford has attempted to bring music within the sphere of practical therapeutics and submit it to the test of systematic clinical experiment. The objects of the Guild of St. Cecilia, founded by him, are: 1. To test, by trials made in a large number of cases of illness, the power of soft music to induce calmness of mind, alleviation of pain, and sleep. 2. To provide a large number of musicians specially trained to sing and play the very soft music which alone should be administered to those whose nerves are weakened by illness. These musicians should be in readiness to answer promptly the summons of a physician. 3. To hire or build in a central part of London a large hall in which music shall be given throughout all hours of the day and night. This music to be conveyed by telephone attached to certain wards in each of the chief London hospitals. 4. To obtain opinions and advice respecting the classes of illness in which music is likely to be most beneficial, and to collect and record all reliable accounts respecting permanent benefit that has followed the use of music. The work of sending musicians to hospitals and infirmaries has already commenced, and it is intended to continue the experiment long enough for a definite conclusion to be arrived at as to the services which music is likely to render to the sick.

Notes and News.

American Public Health Association.—

The 19th annual meeting will be held at Kansas City, Oct. 20th to the 24th, 1891. The local Committee of Arrangements announces that all the railway passenger associations of the county have granted a one and one-third fare rate for the round trip on the usual certificate plan, that is:

(1.) Procure a certificate of attendance from the agent at the starting point by paying full fare to Kansas City.

(2.) Have the certificate of attendance signed by the proper officer of the Association at Kansas City. This certificate will then procure return ticket for one-third fare. All the leading hotels of Kansas City will give special rates to delegates. Arrangements are being perfected for an excursion into Kansas, as one of the features of the entertainment of the Association. For any information as to the meeting, address Dr. E. R. Lewis, Chairman, or Dr. Joseph Sharp, Secretary Local Committee of Arrangements, Kansas City, Mo.

The Electric Fan in the Reduction of High Temperature.—

An editorial writer in the Texas Health Journal suggests that the electric fan may be pressed into service in the lowering of high temperature in fever. He says he does not know of an actual test being made of the power of the electric fan, or wheel, in reducing the temperature in fevers, but its great force in cooling the surface of the body leads him to believe it will act very similarly to the cold bath, as used in many forms of fever. It would seem to be a simple matter to determine whether or not the electric fan will lower high temperature. But whether it will or not, it certainly would be an excellent sanitary measure in typhoid and other slow cases of fever, causing a constant renewal of the atmosphere, driving out the contaminated air of the sick-room, and forcing in the fresh air to take its place. The fan would also blow away all mosquitoes and flies from the neighborhood of the patient's bed.

What Did Shakspeare Die of?

There is a tradition of very respectable antiquity that he died of a fever contracted through going on a drinking bout with Ben Johnson and other boon companions. Mr. J. F. Nisbet, in his new work, "The Insanity of Genius," discusses the question from an entirely new point of view, that of pathology. In the author's opinion, Shakspeare died of paralysis or some disease akin to paralysis. The signature to the will, he holds, affords strong presumption of this, but he has also other facts to adduce in support of this theory. In 1657 Dr. Hall's medical cure-book was published by James Cooke, "A practitioner in physick and chirurgery." Dr. Hall, as is well known, was Shakspeare's son-in-law, and his book proves beyond doubt that nervous disease existed in Shakspeare's family, a fact which Mr. Nisbet considers accounts for the short average duration of the lives of its members, and the speedy extinction of the line of Shakspeare's direct descendants.—*Medical Times.*

A Ministering Angel.—

O woman, in our hours of ease,
Uncertain, coy and hard to please,
When pain and anguish wring the brow
Then none so cheaply pleased as thou!
We've only to submit to take
Hot rhubarb tea and anti-ache,
And gizzard oil and ipecac,
And porous plasters on the back,
A flax-seed poultice, catnip tea,
And Quackem's new discovery.
Hot-water bags and sweats beside,
And camphor nasally applied,
And castor oil and vaselin,
And coals with feathers burnt between,
And soothing syrup, paregoric.
Cold-water cloths and drinks caloric,
And all the housewife's category—
'Tis then we see her in her glory,
Needing to make her bliss complete,
But mustard plasters on our feet.

—*Harper's Bazar.*

Five Years' Medical Course.—

The Medical Council of the College of Physicians and Surgeons of Ontario recently passed the following resolution: "On and after July 1st, 1892, every student must spend a period of five years in actual professional studies, except as hereinafter provided, and the prescribed period of studies shall include four winter sessions of six months each, and one summer session of ten weeks; the fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario, and six months at one or more public hospitals, dispensaries, or laboratories—Canadian, British or foreign—attended after being registered as a medical student in the register of the College of Physicians and Surgeons of Ontario; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made."

Don't Look for Flaws.—

Don't look for flaws as you go through life;
And even when you find them
It is wise and kind to be somewhat blind,
And look for the virtue behind them.

Don't waste a curse on the universe—
Remember, it lived before you.
Don't butt at the storm with your puny form,
But bend and let it blow o'er you.

The world will never adjust itself
To suit your whim to the letter;
Some things must go wrong your whole life long,
And the sooner you know it the better.

A New Bi-Weekly—The Fortnightly M.D.—

Dr. Bransford Lewis, of St. Louis, formerly editor of the Weekly Medical Review, and late foreign correspondent of the Medical Herald, announces the prospected establishment, Jan. 1st, 1892, of a new medical journal under the unique title of "The Fortnightly M.D.," which will make 24 professional visits to its readers for $2.00.

Dr. Lewis' attainments as a journalist are well known to medical readers, and his large circle of friends will await with interest the advent of this new child of his fancy.

A Souvenir Edition of the New England Medical Monthly.—

Ten years ago the first number of this journal appeared, and to celebrate the event the September number was issued in the form of a souvenir edition. We think the editor must have added amateur photography to his other accomplishments, and have been experimenting after the celebration, if we may judge from the portraits that appear in this number.

Medical Alliance Transactions.—

The Transactions of the First Annual Meeting of U. S. Medical Practitioners' Alliance have been published, and are now ready for distribution to the profession. The volume contains the addresses in full delivered at the Baltimore meeting, together with the Constitution and By-laws, and other information. A copy will be mailed to any physician interested who will send stamp to the Secretary, Dr. J. F. Davison, Glendola, New Jersey.

The Infectious Diseases Institute at Berlin.—

The new institute, which is designed to be under the direction of Dr. Koch, at Berlin, was only opened August 17th, and the first six patients were brought in that same evening. Professor Brieger has been appointed over the clinical department, and Dr. Pfeiffer over the scientific laboratory. Dr. Behring is among the scientific assistants. The nursing has been assigned to the Brandenburg Sisterhood, a body ignoring all sectarian distinctions.

A Prize for the Best Essay on the Prophylaxis of Syphilis During Lactation.—

A prize of one thousand francs ($200) is offered by the French Academy of Medicine for the best essay on the Prophylaxis of Syphilis During Lactation. Essays in competition must be in the hands of the Academy before March 1st, 1892.

Editor of the University Medical Magazine.—

Dr. J. Howe Adams has recently been appointed senior editor of the University Medical Magazine. Dr. Adams' long experience in journal work and intimate association with the profession of Philadelphia, should stand him in good stead in the performance of the responsible duties he has undertaken.

A Solution of the Counter-prescribing Difficulty.—

Two druggists in Chicago were recently arrested and fined $100 each for practising medicine without a license.

Dr. A. D. Rockwell

Has resigned the chair of Electro-Therapeutics at the New York Post-Graduate School.

Therapeutic Brevities.

Spasmodic Wry-neck.—Noble Smith has published a pamphlet on this subject, in which he arrives at the following conclusions:

1. Neither drugs, local applications, nor other general methods are of any permanent use in the treatment of well-established spasmodic wry-neck.
2. Electricity has failed to do any permanent good except in some recent cases, which probably differed entirely in their nature from those referred to.
3. Nerve stretching, although successful in a few cases, cannot be depended upon as a certain remedy.
4. Section and ablation of a piece of the spinal accessory nerve is absolutely certain to remove all spasm from the muscles supplied by that nerve and is very likely to remove spasms set up in other muscles, although other nerves are apparently involved.
5. The most certain and satisfactory plan of operation is section of the nerve upon the inner side of the sterno-mastoid before it enters the muscle.
6. When other muscles remain spasmodically affected, the spasms may be removed by section of the nerves supplying those muscles.
7. The operations of section of the spinal accessory nerve, and of the posterior roots of the cervical nerves, are not followed by serious inconvenience to the patient from paralysis of the muscles.
8. There seems to be no risk of the reunion of the nerves and return of the spasms after operation.
9. It seems probable that other convulsive movements of the head may be remedied by section of nerves.

Treatment of Hæmorrhoids by Electricity.—Blackwood believes that this agent possesses a positive curative value in some cases, while galvanism may be relied upon to relieve the tormina incident to this painful condition; it is the faradic current which he relies upon for actual curative effect. He places one pole on the sacrum and the other on the hæmorrhoidal mass, using a steady current, as strong as can be comfortably borne, for ten or fifteen minutes at each sitting. And if the tumor is too painful to allow this method of application, he introduces the electrode in the rectum, the same being insulated, all except the last three inches, which passes completely within the sphincter. The

parts are bathed with hot water before and after the application, and he cautions that the rectum should be emptied before treatment to avoid what might prove a very unpleasant accident to both patient and physician. He fails to state, however, how long a time is necessary, or how many applications are required to bring about a cure.—*Archives of Gynæcology*, Sept., 1891.

Etherization in Croup.—In the Lancet, May 16, 1891, the treatment of a case described in the Memorabilien, by Dr. F. Betz, is given, which consisted of the inhalation of a mixture of 3 parts of sulphuric ether, 1 part of acetic ether, and 1-16 part of menthol, of which three drops were given as an inhalation every quarter of an hour. In two hours a decided change for the better had taken place, and the inhalations were continued at intervals of half an hour. Preparations for tracheotomy had been made, but this was now seen to be unnecessary. The regular administration of the inhalation was stopped, but another mixture of a somewhat similar character, containing 3-10 part of menthol, was ordered in case of any recurrence of the alarming symptoms. This, however, was not required, and the patient recovered. The inhalations ought not to be continuous, but intermittent, and the medical man should, for the first hour or two, administer them himself.

Treatment of Diphtheria by Ice.—Sevestre reports in behalf of a committee that diphtheria may be treated by the use of ice alone. Small pieces are inserted into the mouth of the child every ten minutes, day and night. This can be done without annoying the child, even though it be sleeping. The ice should be continued for some time after the membrane has disappeared. Sevestre does not recommend, however, that this be the sole treatment, but that it may be made a powerful adjuvant to the ordinary antiseptic medication of diphtheria.—*Annals of Gynæcology and Pædiatry.*

Bull-Nettle as an Alterative.—Dr. W. W. Pugh, New Birmingham, Texas, claims ("South. Pract.") that bull-nettle (*Jatropha stimulosus*) has given excellent results as an alterative especially in the treatment of syphilis. He uses gr. xx to 3 i doses thrice daily of the tincture.—*Medical Standard*, Sept., 1891.

Medical Progress.

PROSTATICS AND THEIR TREATMENT.—Prof. Guyon, in Journal de Médecine de Paris, says:

In prostatitis three periods may be distinguished. In the first are congestive phenomena, which may be almost alone encountered; the two characteristic features of its symptomatology are frequent nocturnal calls and polyuria. In the second period there is incomplete retention; the patient does not completely empty his bladder, and a certain quantity remains stagnant in the *bas fond*. Finally, the third period is established when to the retention there is added a distention of the vesical reservoir, the muscular contractility of which is profoundly involved, and which rests inert; the consequence is incontinence from overflow.

Each of these periods demands a particular treatment. In the first, the congestive phenomena are principally to be combated. We know that the morbid symptoms are chiefly nocturnal and occasioned by repose in bed; it will therefore be desirable that patients remain in bed the least time possible, from seven to eight hours on the average. Again, it is well for them to arise two or three times during the night and walk a few minutes in their chamber. The sitting position should likewise not be prolonged. On this account long railroad journeys are particularly harmful and often precipitate crises of complete retention; the same is true of prolonged repasts.

Among remedial measures, a medication directed toward the prevention of constipation figures in the first line. Internally, a few medicaments; narcotics, calmatives, are especially to be proscribed; administered by the mouth or in the form of suppositories, they may for a few nights attenuate the frequency of the desires to urinate, but it is an artificial calm, attended with risk of provoking or increasing the congestive condition. On the other hand, there is one remedy, the iodide of sodium, which acts beneficially on the general system. We know that prostatics are atheromatous, and that this diathetic state is modified in a certain measure by the use of the iodides; 20 to 50 centigrammes each day is sufficient.

All local therapy addressed to the prostate or the bladder is interdicted in this stage.

The second period of prostatism is characterized by the incomplete emptying of the bladder; the dominant treatment should therefore be evacuating catheterism. It is

necessary to supply the place of the insufficient contraction by assuring a regular drainage and evacuation. To get the bladder dry frequently and in a methodic manner is the first act in the treatment of prostatics in the second stage. This precaution suffices when neither the bladder nor the upper passages are involved in inflammation or suppuration. It is most important. Often we see old men neglecting, not only antisepsis, but the ordinary rules of cleanliness, carrying their catheter in the pocket or the hat, moistening it with saliva in order to lubricate it. Nevertheless they preserve their urine clear and limpid, and their bladder is not inflamed. The explanation of the fact is that, while they introduce septic elements in the bladder, they allow them to immediately escape; there is no stagnation, and these organisms cannot develop. It is none the less true that such carelessness is dangerous, that the bladder will be sooner or later inoculated, and the more rapidly the less precaution taken.

With this three injections of about eight grammes each should be made every day after urination, the patient in a recumbent position. The injection should be retained from ten to twenty minutes. The first injections should be made by the surgeon himself. The injection treatment should be continued until after the complete disappearance of the discharge, and, as a measure of precaution to prevent relapse, a few supplementary injections should be employed.

Third Period.—In this stage the balsamics are especially indicated. Oil of santal possesses a remarkable efficacy, but it is necessary to administer large doses, ten to fifteen capsules daily, and the remedy is costly. The treatment for this stage may thus be formulated: Let the discharge diminish under the influence of balsamics and without any local treatment whatever. Should the affection date back two or three months, and the discharge be slight or almost nothing, have recourse to instillations. Should the patient come under observation in the *fourth period* we must still have recourse to instillations, with a quasi-certainty of success. Finally, we may have to do with a gleet, not only prolonged, but inveterate and chronic, and in such cases instillations of nitrate of silver constitute the only procedure which has given remarkable results; they constitute the surgical arsenal of chronic gleet; properly employed and conjoined with a suitable regimen, the effects are marvellous.

The instillations should be made every two or three days, as a general rule every three days, and more frequently if toward the fourth or fifth *séance* the looked-for improvement is not produced. As a general rule, anterior instillations are made; in rebellious cases it may be necessary to carry them behind the bulbous portion.

The necessary number of instillations varies within wide limits. In simple cases eight or ten usually suffice; in rebellious cases twenty may be required; ordinarily the patient is informed that about twelve will be necessary, comprising six weeks of treatment, the first ten being given every two or three days, the eleventh after an interval of eight days, and the last after ten or fifteen days' intervals, in order to insure a maintenance of the cure.

The instillations should not be made indifferently with the same strength of solution; they should be divided into two series of six instillations each; the first six of a strength of 1:50; two drops of this solution should be used at the first instillation, and the dose gradually increased by one drop at each new instillation. After the sixth, the instillation should be recommenced with two drops of a solution of the strength of 1:30, increasing the dose one drop each new instillation to the twelfth, inclusive. During the entire duration of the treatment the patient should avoid long walks, horseback-riding, and wear a suspensory bandage. In several thousand instillations the author has observed only one case of orchitis attributable to the treatment.

In conclusion the practical indications of the treatment of gonorrhœa are formulated as follows:

1st Period (second or third day)—Abortive injections of nitrate of silver.

2d Period (third to tenth day, about)—Injection of iodoform in oil or bicarbonate of soda baths.

3d Period (tenth to fifteenth day, to the end of the first month)—Balsamics.

4th Period (second to third month)—Instillations of nitrate of silver.

5th Period (after third or fourth month)—Instillations with nitrate of silver.

When there is vesical suppuration, antiseptics are necessary; the old ones are still the best; boric acid in the ordinary simple cases; nitrate of silver in those where suppuration is obstinate. Washing out the bladder demands for its efficacy a certain degree of mechanical action; it should lift up and remove the mucosities and deposits accumulated in irregular bladders, and not constitute a sort of irrigation which passes beneath the mucosities, without detaching them.

When to incomplete retentions there is

superadded vesical detention, the third stage of prostatism is established, surgical treatment is indicated, but it is attended with dangers which exist in but a feeble degree in the second stage; also recourse should be had to medical treatment, which is of the highest importance. Insalivation and deglutition are difficult; it is therefore necessary to resort to liquid or semi-solid aliments, such as purées of meat, eggs, milk, etc. Tonics, bitters, quinine, colombo should be prescribed, good wine may be freely used, and sometimes, even when the patient needs stimulants, cognac or rum. Finally, living in the open air, moderate exercise, and especially cutaneous excitement, dry frictions, constitute almost the entire medication appropriate.

As regards catheterism at this stage, it requires the most delicate decision. Intervention is perilous, and a certain proportion of patients abandoned to themselves sometimes survive for some time. On the other hand, many of them who have the bladder evacuated retrograde toward the second stage, and have better health. If renal insufficiency is certainly demonstrated, it is much better to entirely abstain; in other cases the catheter may be used, but taking infinite precautions.

The rules of catheterism have been elsewhere exposed. It is understood that we should not proceed to a rapid evacuation; to empty at once a distended bladder is to expose the patient to the danger of vesical hemorrhage; it is necessary to desist as soon as the urine does not escape in a jet, but falls in dribbling drop by drop. It is especially necessary that the strictest antiseptic precautions should be employed, the slightest error may be followed by rapidly fatal infectious accidents. Antiseptics should likewise be introduced within the bladder; a solution of boric acid, five-per-cent. constitutes the best preparation. A certain quantity of urine is evacuated, which is replaced by a somewat less, but quite considerable, quantity of the boric solution, which may be repeated several times in succession.

THE PRODUCTION OF IMMUNITY AGAINST, AND THE CURE OF, PNEUMONIA.—In 1890 was published the important discovery by Behring and Kitasato that blood serum taken from animals that had been rendered immune to tetanus and diphtheria was capable of curing other animals suffering from those diseases. Drs. G. and F. Klemperer (Berliner klinische Wochenschrift, August 24th and 31st, 1891) published a research carried out in regard to pneumonia, with the objec of discovering how immunity against th pneumococcus could be best produced whether recovery from the disease rendere an animal immune, and whether it was pos sible to cure pneumonia by the blood serun of animals that had recovered from the dis ease. Their experiments, which were con fined to rabbits, revealed that every nutrien medium in which the pneumococcus ha been cultivated will, if inoculated, render a animal immune against pneumonic septi cæmia, even after the cocci have been re moved by filtration. The power of produc ing immunity is more speedily acquired, an is increased, if the infected nutrient mediun (before or after removal of the cocci) is ex posed to a temperature of between 41° to 42 C. for two or three days, or of 60° for a hour or two. In every case, however, it wa found necessary that some interval (varying from three to fourteen days) should elaps between the inoculation and the productio of immunity. Hence it was too late to cur a diseased animal or even to prevent the on set of an attack if the injection was give simultaneously with the outbreak of the dis ease. On the other hand, serum taken fron animals enjoying immunity was found able especially when introduced directly into th circulation, to cure pneumonic septicæmia The serum was injected twenty-four hour after infection, while the animals had a febrile temperature of between 105° an 106.5° F. Eight cubic centimetres were in jected with the result that the temperatur gradually sank during the next twenty-fou hours. In twelve successive cases a success ful result was obtained. This researc therefore confirms, in regard to pneumoni in rabbits, what Behring and Kitasato di for tetanus and diphtheria. Drs. Klempere next studied the question how the bloo serum of an immune animal cures an attack of pneumonic septicæmia, and discovere that when the pneumococcus is introduce into the body of an animal it generates a poisonous substance which can be isolated and to which the name of "pneumotoxin" has been given. This pneumotoxin sets up a febrile condition which lasts several days after which another substance is found t have been produced called "antipneumotoxin," which is able to neutralize the pneumotoxin. The serum taken from an immune animal contains this antipneumotoxin, and it is by means of this substance that is cures an attack of pneumonic septicæmia in other animals. The relation of pneumonia as seen in rabbits with that met with in man was next investigated, and the conclusion arrived

t that the disease in both cases is produced y the pneumococcus, but that the human ody is much less susceptible to the latter an the rabbit is. Thus it was found that erum taken from pneumonic patients after ne crisis could cure pneumonia in rabbits; noreover, pneumotoxin and antipneumo- oxin were found to be present in human erum as in that taken from rabbits. The risis of pneumonia, according to Dr. Klem- erer, takes place as soon as antipneumo- oxin is produced in sufficient quantity to eutralize the pneumotoxin. Why immunity gainst further attacks lasts so short a time n man is still uncertain, but possibly less ntipneumotoxin is formed in man than in abbits in proportion to the pneumotoxin. ome attempts have already been made to ure patients suffering from pneumonia with ne help of antipneumotoxin, but further ob- ervations are necessary before results can e published.—*British Med. Jour.*

Mosquitoes as Preventive Inocula- ors.—We referred recently to the curious ethod of conferring immunity against yel- w fever employed by Dr. Carlos Finlay, of avana, namely, causing healthy individuals be stung by mosquitoes which had previ- usly bitten those suffering from the fever. he experiments in this direction have been rried on now for about ten years, and the sults would seem to show that this insect a good attenuator of the yellow fever rus.

In the American Journal of the Medical iences for September, 1891, Dr. Finlay resents some statistics of his preventive in- culations by means of these insects which e interesting. He was fortunately able to otain some useful comparative statistics om the fact that he had medical charge of vo religious communities, the members of hich are partially renewed almost every ear by the arrival of new-comers from pain to substitute others who have resided veral years in Havana. Nearly every ear he inoculated some of the new-comers, hile others did not go through the ordeal. uring the period 1883–1890, forty-nine of ese new-comers were inoculated, and thirty- vo were not. After deducting from the in- culated thirteen cases who had not been ng enough in the country to permit of any finite conclusion to be drawn from them, ere remained thirty-three inoculated, and irty-two not inoculated members of the me communities, having arrived in the me years, leading the same life, and ex- osed to the same chances of infection. Indeed, it would be difficult to find anywhere a better opportunity for comparing the results of any method of prophylaxis. Of the inoculated some had no febrile symptoms, either immediately after the inoculation or subsequently; others had a mild attack of fever, accompanied or not with albuminuria; and two had regular yellow fever, from which they recovered. Of the not inoculated, twenty-one either had a mild fever or escaped all illness, and eleven had yellow fever, five of them dying. Thus none of the inoculated died of yellow fever, whereas five (or fifteen and a half per cent.) of the non-inoculated did die of it. Of all the persons inoculated in and out of these communities, but one died of yellow fever.

From a study of these comparative results, and of the results obtained in other cases in which inoculations were practiced by Drs. Finlay and Delgado, the author draws the following conclusions as to the value of his method:

1. The inoculations with one or two recently contaminated mosquitoes, in the manner practised, are free from danger, inasmuch as the numerous trials which have been made have produced at most (in about eighteen per cent. of our cases) a mild attack followed by immunity.

2. We must attribute to the influence of the inoculations with contaminated mosquitoes: *a*, The mild acclimation observed in ninety-four per cent. of our cases, whereas the same desirable result has only occurred, *cæteris paribus*, in sixty-five and a half per cent. of the non-inoculated; *b*, the reduction of cases of regular yellow fever to the proportion of six per cent. instead of nineteen per cent.; and, *c*, that of fatal yellow fever to less than two per cent. instead of fifteen and a half per cent., one single death from yellow fever having occurred among the sixty-seven persons inoculated since 1881 until the present date.

3. The contaminated mosquitoes appear to lose, either partially or completely, their contamination after they have stung healthy subjects; whereas the contamination appears to become intensified by successive stings of the same insect on yellow fever patients.

4. The inoculations performed during the colder season should not be considered to afford sufficient protection, but should be repeated on the approach of the hot season. —*Medical Record.*

The Therapeutics of the Senile Heart.—Dr. George W. Balfour has published, in the Edinburgh Medical and Surgi-

cal Journal, a useful series of papers on the therapeutics of the senile heart.

As in old age it is the heart and vessels which oftenest give trouble and warn the patient that his declining years have come, the treatment of these conditions naturally excites interest.

The senile heart is essentially, says Balfour, a heart in which the main trouble is malnutrition. It is not, however, a fatty heart, this being a very rare condition, and one "impossible to recognise."

The first symptoms of approaching senility of the heart are irritability and a sensation of uneasiness in the cardiac region, sometimes amounting to pain. Along with this there may be fits of palpitation, in the form of rapid but not usually forcible action, which comes on after exertion, such as running rather quickly upstairs, upon any excitement or sudden emotion, or during the night from reflex causes, mostly of gastric origin; or there may be fits of *tremor cordis* coming on suddenly, without warning and apparently without cause. The rhythm of the pulse is occasionally and temporarily irregular in force and frequency; or it may simply intermit, drop a beat at irregular intervals; or this intermission or dropping of a beat may occur at regular intervals of longer or shorter duration, and this regular intermission may either be constant, or only occur occasionally at irregular intervals, and mostly as the result of emotion or of gastric disturbance.

These phenomena are always indicative of cardiac debility, which, left to itself, sooner or later leads to dilatation of the heart, as well as other serious symptoms which we find associated with senile degeneration of that organ. After a time attacks of cardiac failure or of angina may occur; but this is not always the case. Many patients suffer for years from the *tremor cordis* and other symptoms, without any more serious trouble supervening. The pulse may be small, soft, and compressible, with a low blood-tension. In these cases there is more often anæmia of some form. If the pulse is hard and tense, then we may suspect a gouty or renal complication, or both. Sometimes the arteries are plainly hard from the atheroma, and yet the blood-tension is low; and here we must suspect a feeble and dilated heart.

When the blood-pressure is low, carefully graduated exercise is especially indicated.

A great deal of importance is attached by Dr. Balfour to the diet, especially in cases complicated with obesity. His main rule, however, is temperance in food and drink; another important point is that the meals should be five hours apart, and that th heavy meal should be in the middle of th day. Very little fluid should be taken at th meals, and alcohol is much better not take at all. Tobacco also does harm, as a rule.

Among drugs stress is laid upon digitalis given in small doses in the form of the tinct ure. Strychnine, arsenic, the nitrates, and i cases of high tension the iodide and bicar bonate of potassium, are recommended. Fo constipation and flatulence he advises th old compound galbanum pill.

ELECTRO-THERAPEUTICS ON A SCIENTIFI BASIS.—In an article by W. J. Herdman, M D., entitled "Electricity as a Therapeuti Agent; What Can be Done to Determine It Value," published in the Journal of Nervou and Mental Diseases, September, 1891, th author sums up the ideal conditions fo establishing electro-therapeutics on a scien tific basis, which are:

1st. A thorough preparation in electro physics, physiology and therapeutics on th part of the operator.

2d. A *source of electric power*, as a dynam or storage battery with a constant, unvary ing voltage, from which the current is con veyed to hospitals, physicians' offices or pa tients' houses.

3d. A *current regulator*, rheostat or modifie by which the strength of the current may b adapted to the needs of individual cases, and this should be of convenient size, durable o construction and simple in arrangement. The simplicity, economy and efficiency of such ap pliance would insure its being readily adopted by the profession.

4th. A *series of electrodes*, which should be constructed according to a fixed standard as to size and shape, and they should be made of material which is cheap, readily conducting and non-polarizable.

5th. All should make use of a *standard milliampèremeter* for determining "strength of current," and a *colombmeter* for "quantity" or dose.

Complying with such conditions as these, progress in determining the limitations of electricity as a therapeutic agent would advance with rapid strides. The incandescent electric light plants, with low electro-motive force, are very common throughout the country. The physician and dentist finds the current extremely useful in his office. It illuminates his apartments, it runs his motors, it lights the tiny lamps with which he explores the cavities of the body, it heats the waters for his sprays and douches. It will not be long before it will be made use

of by the many, as it has been by the few for some time, for all the applications of electricity to the human body, since it does away with a host of difficulties that have, up to the present, been of such magnitude as to make electric applications either a burden or a farce.

GLYCERIN SUPPOSITORIES.—A short time ago glycerin came rapidly into repute as a laxative, and an enormous number of syringes were sold for injecting it into the rectum. Its indiscriminate use, often in very unsuitable cases, has led to its equally rapid decline in popular favor. Glycerin is a very deliquescent substance, which rapidly absorbs moisture from, and stimulates, the mucous membrane; it thus quickly leads to reflex peristaltic action, with evacuation of the rectum, and perhaps large bowel. Its very stimulating effect often leads to uncomfortable sensations in the rectum, especially if there be any hyperæmia of the parts, and hence its use should be strictly limited to those cases where there is a habitually sluggish action of the lower bowel. When there is any inflammatory action its use is strongly contra-indicated. Any dilution with water lessens its hygroscopic character, and so diminishes its activity, hence it should be used as nearly pure as possible. On this account the activity of the glycerin is much diminished when administered in the form of suppositories, as commonly prepared with gelatin, because in their manufacture a certain proportion of water is necessary for its solvent action on the gelatin. Messrs. Parke, Davis & Co. have overcome this objection by incorporating 95 per cent. of glycerin with 5 per cent. of stearine soap. Thus an excellent suppository is formed, which is not very soluble, yet sufficiently so to make it quick and effective in action. The suppository is made in the form of a double cone, which renders its introduction into the rectum very easy. One is sufficient for an adult, and any required size may be cut off for a child. They should be kept in well-corked bottles to prevent the absorption of moisture from the atmosphere.—*Liverpool Medico-Chirurgical Journal.*

HERNIA IN WOMAN.—M. Lucas presented before the Société de Chirurgie, of Paris, some observations on the radical cure of hernia in woman. He said that this form of hernia is not at all infrequent in the opposite sex, and when the woman is young she is very much inconvenienced by the bandage; and later on, when pregnancy takes place, the apparatus is out of necessity laid aside, and consequently the volume of the rupture is increased. Inguinal hernia, on the other hand, differed considerably in woman from what we are accustomed to meet with in man, and he would make a few remarks on the congenital form, which he found to be very frequent. The congenital variety is due to the persistent potency of the canal of Nuck. Out of a total of 231 radical cures which he practiced for non-strangulated hernia, 14 were on women, and of this number 10 were congenital. The anatomical conditions of the hernial sac and its connections show clearly that the lesion is congenital; the serous lining of the sac is intimately confounded with the fibres of the cord; it is frequent to find complementary small cysts reaching to the labium majorum. The volume of these herniæ is not generally very considerable; he observed, however, one case where it descended nearly to the knee. The hernia is particularly painful and irreducible. For the operation he would advise the incision to be made from above downward, in order to isolate the sac and the fibrous cord. The round ligament forms an integral part of the sac and is impossible to isolate, contrary to that observed in man, where the spermatic cord can always be separated. The sac should be carefully dissected into the abdomen, and then cut across along with the round ligament. When the sac is opened it is frequent to find the ovary in the cavity or at its orifice; it may be normal, sclerosed, or atrophied. M. Lucas has frequently removed it. One of the most happy results of the operation is the cessation of pain.—*Archives of Gynæcology.*

DETECTION OF THE BACILLUS OF TYPHOID FEVER.—The detection of the bacillus of typhoid fever has always been a matter of some difficulty, owing to the circumstance that various other bacilli resemble it both morphologically and biologically. Prof. Uffelmann (Berlin. klin. Wochenschr., August 31st, 1892) recommends as the best nutrient medium for its culture an acid gelatine colored blue with methyl violet. The advantage gained is that few kinds of bacilli except that of typhoid can grow on such soil, and it is consequently easier to pick it out from amongst them. The usual meat infusion (containing peptone and gelatine) is acidified with citric acid, until 10 cubic centimetres of the nutrient jelly are equivalent to 14 cubic centimetres of a solution of carbonate of soda 53 per cent. The solution is now

filtered, and mixed with methyl violet (in the proportion of 2.5 milligrammes to 100 cubic centimetres), which has been dissolved in 1 cubic centimetre of distilled water with 1 drop of alcohol. The mixture is then poured into sterilized glasses, and heated in a steam bath for fifteen minutes. On such a medium the bacillus of typhoid grows readily. After twenty-four hours (at a temperature of 20° to 21° C.), roundish or oval colonies show themselves, possessing a bluish tint, which gradually becomes of an even deeper blue than the surrounding gelatine medium. From these colonies others can be sown in the usual way on acid potatoes and on any other desired media, so as to determine whether the bacillus presents the ordinary morphological characters of the typhoid organism.—*British Medical Journal.*

The Abortive Treatment of Buboes.—Welander reports a second series of fifty-nine cases of bubo treated by means of injections of benzoate of mercury. In all, he has now treated one hundred buboes in this way with thoroughly satisfactory results in seventy-eight. He uses the following formula:

℞ Hydrargyri benzoatis, gr. v.
Sodii chloridi, gr. jss.
Aquæ destillata, f ʒ j.
Sig.—♏xv as an injection.

As a result of his observations he has arrived at the following conclusions:

1. If the bubo display a virulent tendency, the injection does not affect its development, and suppuration occurs.

2. When decided fluctuation exists and the skin is thin and cyanotic, the injection can only hasten the disappearance of the infiltration. As a rule the bubo must be opened.

3. If fluctuation is considerable in degree, but the skin, though red, is thick and well nourished, the chances are good that an injection into the adjacent infiltrated area will (possibly in 50 per cent. of cases) obviate the necessity of opening the bubo.

4. If there is little or no fluctuation, it is highly probable (possibly in 90 per cent. of cases) that, even though fluctuation subsequently becomes decided and a few drops of pus ooze from the site of puncture, the bubo will disappear, leaving no trace of a cicatrix. —*Medical News.*

Pepsin Cordial.—There are at present in the drug market an enormous number of pepsins, good, bad and indifferent. The variable character and unreliability of many of the preparations have no doubt had much to do with the fluctuation in medical opinion respecting the value of the drug. Young practitioners prescribe pepsin freely, while older men get on very well in their practice with a very limited use of the drug. The latter class of practitioners try to find out the cause of the stomach not doing its duty, and endeavor to rouse it up into action rather than relieve it of its work. The quantity of pepsin necessary to digest a good meal is very considerable, and the usual doses recommended can never have a greater effect than a fillip to digestion. However, there are many cases in which a fillip is very desirable, and there seems to be no very valid reason why a weak digestion should not be afforded this useful aid. The pepsin cordial manufactured by Parke, Davis & Co., is one of the most elegant preparations with which we are acquainted. It keeps well, is very active and exceedingly palatable. It readily digests egg albumen or other proteids, and curdles milk. It is therefore a very convenient agent for preparing junket and whey. We can highly commend the product.—*Liverpool Medico-Chirurgical Journal.*

The Use of Pure Benzol in Whooping-Cough.—After some years' experience of the use of benzol in whooping-cough, I can safely say that it effects better results than all the other remedies recognized as useful in this affection. In the adult and child it is of equal benefit. In an infant just now under treatment the attacks have been reduced from twenty to thirty in the night to two or three, and whereas when the treatment was begun evidences of bronchitis were present, now the chest is clear and the child able to be taken out of doors daily. All this improvement was brought about in less than ten days. I have administered benzol in whooping-cough, where convulsions and other complications were fast reducing all chances of recovery, with perfect success in a few days. In adults, where pertussis assumes often serious aspects, benzol has proved equally efficacious. Two minims in mucilage are sufficient for a child six months old, and five minims in mucilage on sugar or in capsule for adults. I am indebted to an article in the Practitioner of some years back for information regarding this treatment, and can heartily recommend a trial of it. Whenever the benzol odor is observed in the breath of the patient, then all anxiety as to the result may be allayed.—W. Robertson, M. D., Glasgow, in *Lancet*, Aug. 8th, 1891.

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Original Articles.

CLINICAL MEDICINE.

On the Relation of Certain Affections of the Liver to Microbic Infections, with Especial Reference to Two Cases of Jaundice Terminating in Death (Calculous Icterus, Icterus of Pregnancy).

BY DR. F. RAYMOND.*

LECTURE II.

GENTLEMEN:—The biliary infections are divided naturally into acute and chronic, into primary and secondary. Let us take, first of all, the acute secondary infections, to which belongs the case described in our last lecture. Of this kind are those in which the door of entrance of the poison is an ulceration, whether mechanical, as in the case of gall-stone, or organic, as in cancer of the bile ducts. The presence of numerous microbes in the normal state in the duodenum sufficiently explains the possibility of the infection. These infections are monobacterial or polybacterial. The pathogenic agents found have been: The *bacterium coli commune*, as in a recent case of Charrin and Roger; the typhoid bacillus (Dupré); a *streptococcus*, the two *staphylococci;* lastly, many microbes of varied forms not yet classified.

The primary biliary infections are favored both by alterations in the biliary secretion which, in the normal state, certainly play an efficacious protective rôle toward the biliary passages, and by the immigration of pathogenic microbes in the digestive passages, or by an exaltation of the virulence of such as are already there. It is to this class that belong, without doubt, the greater part of numerous varieties of infections. It is in this class also that we should place cases of infection occurring in the course of a general disease such as typhoid fever; and in these cases the febrile hypocholia (biliary-diminution) seems to be the predisposing cause. Of these angiocholites, some are suppurative; such are the cases reported by Charrin and Rogers, by Gilbert and Girode, and by Professor Bouchard, where the infectious agent was the *bacterium coli commune*. Such also, without doubt, are those cases of *areolar abscess of the liver*, described by Chauffard. In one of these abscesses, Claisse has recently found a streptococcus and a microbe which he believes to be the *bacterium coli*. I have already mentioned typhoid bacillus among the microbes which may give rise to suppuration of the biliary passages; but in typhoid fever we may observe all the gradations of the infection from the latent infection not revealing itself till a long time afterward, to perforation of the gall bladder. We pass by the simple catarrhal inflammation, which manifests itself in jaundice. In typhoid fever we may meet with infections by other microbes besides the *bacillus of Eberth*, the streptococcus among others.

The non-suppurative angiocholites are much the most frequent. It is infinitely probable that they are not all dependent on the same microbe, and their gravity varies in considerable proportions, without doubt according to the virulence of the infectious agent. If the infection is profound, the hepatic parenchyma is touched, and the kidney becomes consecutively affected, whether directly (infectious nephritis), or by the soluble poisons which are no longer modified by the liver; these cases are of peculiarly bad prognosis.

In this group of non-suppurative angiocholites, we meet, first of all, with catarrhal icterus, a general disease, "a telluric infection," as Kelsch has proved, by bringing to light its epidemic character and its frequent coëxistence with other telluric diseases, such as typhoid fever and malaria. Another

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group comprehends the chronic angiocholites, and will serve as a point of transition to the case of our second patient. I mentioned in my first lecture the rôle which certain writers attribute to *latent microbism* and to catarrh of the bile ducts in the formation of calculi.

Now, it may happen that a catarrhal icterus, instead of retroceding at the end of several days, may persist for several months, proceeding by successive sub-acute attacks. Niemeyer and Frerichs, in Germany, have called attention to instances of this kind of prolonged catarrhal icterus, so well studied in France by Deulafoy. But there is another group of facts which ought to engage our attention, and it is precisely these which will furnish elements of interpretation for our second case. I refer to the *biliary cirrhoses*.

Till within the last fifteen years, only one form of cirrhosis was known, and this was characterized clinically by ascites, by a state of increasing cachexia, with habitual absence of icterus, by a considerable development of the superficial veins of the abdominal wall, and automatically, by an atrophy of the liver consecutive to a proliferation of connective tissue, inter-acinous and interlobular. In 1875, Hart clearly individualized a type of cirrhosis with icterus and without ascites characterized anatomically by a hypertrophy of the liver, in relation with the connective tissue proliferation of the portal spaces, and a multiplication of the biliary canaliculi; the icterus was attributed by Hart to a chronic catarrh of the bile ducts. In 1876, Charcot and Gombault, studying the hepatic lesions which supervene after ligature of the common bile duct, noticed that these lesions terminated in an interstitial hepatitis which is only a variety of the *hypertrophic cirrhosis with icterus* of Hanoch. By reason of the fact that this form of chirrhosis develops in animals after ligature of the choledochus duct, and is observed in man after obstruction of this duct by a calculus, they called it hepatic cirrhosis in opposition to the common cirrhosis, to atrophic cirrhosis, which they qualified by the name *venous cirrhosis*, to indicate that its starting point is a hypertrophy of the connective tissue of the interlobular ramifications of the portal vein. Besides, Charcot and Gombault had shown the insular *monolobular* character of biliary cirrhosis (hypertrophic cirrhosis) which is both *intra-* and *extra-lobular* in this sense that the connective tissue hypertrophy takes place at once in the intervals of the acina and throughout their whole extent, while common, atrophic cirrhosis is multilobular and peri-lobular.

I may say, in passing, that this schematization, which is so simple and advantageous for the pathologist, does not quite correspond to the reality of things. The data of clinical experience and of pathological anatomy show us how necessary it is to admit mixed forms, and these present themselves so often and constitute such different degrees of transition between the two types of cirrhosis, that all fundamental difference between the two vanishes, and we are obliged to ask if hypertrophic cirrhosis with icterus and common atrophic cirrhosis do not correspond to two distinct phases of the same process? Moreover, Charcot and Gombault have already insisted on the fact it will not do to assign too great an importance to one of the most salient distinctive characters, namely the volume of the liver, and that you may have a case of cirrhosis clearly of venous origin which may be hypertrophic, while you may have another taking its origin in the bile ducts, which is atropic. They have remarked that in the experimental cirrhoses, the volume of the liver is first augmented, and that later, about the twentieth day, the atrophy may show itself. To-day these notions are everywhere current, and more than once you will hear pathologists speak of *cirrhosis histologically hypertrophic with atrophy*, and this concerning cases where the hepatic process is at a stage yet little advanced.

Moreover, guided by a penetrating analysis, Charcot and Gombault were the first to lay down the bases of the microbic theory of cirrhosis; by demonstrating the presence of micro-organisms in the bile of one of the animals which served for their experiments; this demonstration has been made anew quite recently by Netter. Now we have here a notion of prime importance in its relation to the point of view where I stand to-day in endeavoring to interpret the two cases which serve as a subject for these lectures.

Before taking up the case of my second patient, which is one of hypertrophic cirrhosis with icterus, I may ask: What are the ætiological conditions of this disease? I have told you that it is met with in cases of chronic obstruction of the bile ducts, and we have seen how lithiasis predisposes to infections, if even it is not a consequence of them. We also observe hypertrophic cirrhosis in malaria, now known to be an infectious disease, while Laure and Honorat have lately called attention to the frequency of biliary cirrhosis with jaundice in children after infectious diseases, especially measles and scarlet fever. These writers describe the lesion as seeming to start in an inflammation of the bile ducts; in all the cases which they report there was in fact a notable alteration of the epithelium, and an abundant formation of new canaliculi. This new formation at the expense of the hepatic cells, without doubt, betokens an irritation coming from the bile ducts; it indicates an angiocholitis which is itself accompanied by a peri-angiocholitis. This is the way that they describe the lesion at the onset, when the sclerosis is not yet formed: "The connective tissue of the portal spaces is the seat of a considerable cellular infiltration; the lumen of the portal vessels is enlarged. The biliary vessels are much more numerous than in the normal state."

To come now to the case which was to form the subject of this lecture: This patient is a female, aged 35 years, a domestic, pregnant. She entered the ward Trousseau, bed No. 23, March 26th, 1891, for a progressive enfeeblement of three months' standing, accompanied with icterus from the start.

Hereditary antecedents: Brother rheumatic, mother asthmatic. Personal antecedents: She suffered much in the course of a previous pregnancy; vomited for four months.

For the last three months she has had severe gastric troubles; loss of appetite, absolute.

Pregnancy three months advanced; pricking sensations in the breasts. Vaginal examination showed the neck of the womb softened and the body of that organ augmented in volume.

A marked general depression at the time she entered the hospital, was the actual state of the patient. We noticed also on this occasion a jaundiced hue of the integuments, and sclerosis. The abdominal wall appeared to be infiltrated and œdematous. No œdema in the inferior members.

The patient complained of a severe pain in the umbilical region, where palpation disclosed nothing special; but we noted dilatation of the stomach and a characteristic *glou-glou* sound.

Lungs and heart appeared to be healthy.

In the urine a slight cloud of albumen. Urates and bile in quantity.

Besides the loss of appetite (especially for meat and fats), there was usually vomiting a short time after meals.

These signs, joined to the general depression of the patient, the jaundiced hue, absence of fever, led us to suspect a latent cancer of the stomach with secondary cancer of the liver.

Inanition made rapid progress the following day, Anorexia absolute. There was severe thirst, which was only assuaged by ice. The breath was fœtid. The patient died April 21st. During the entire duration of the sickness, the temperature oscillated between 37° and 38°; there were no hæmorrhages.

The autopsy gave the following results:

There was no ascites.

The liver weighed 1300. grammes; was not nodulated; its surface was smooth; tissue was easily torn by the finger nail. On section, it had a slimy look; color was greenish mottled with spots of yellow. The distended gall-bladder contained fluid bile; the bile ducts were free and did not seem to be altered. The bile ducts were not dilated.

The spleen weighed 120. grammes, and the tissue appeared to be normal. The kidneys weighed together 220. grammes; their capsules were slightly thickened and could not readily be decorticated; the surface was slightly granular, showing radiating veins which were very much congested. The cortical substance and pyramids were diminished in volume and icteric. The stomach was healthy, with exception of a slight slate-gray discoloration of the mucous membrane.

The heart weighed 220. grammes; was flabby and a little fatty.

The lungs presented no other alteration than an œdematous congestion.

The uterus contained a fœtus weighing 30. grammes.

The histological examination of the liver was particularly interesting. We noticed about the portal spaces lesions exactly like those which Laure and Honorat describe as occurring in the infectious hepatitis which precedes cirrhosis. These spaces were more voluminous than ordinarily, and Kiernan's fissures were a little dilated; this dilatation was the result of an infiltration with embryonal cells. In the smaller spaces the cells were round; in the points where the lesion seemed oldest, they had a fusiform appearance. The portal veins were much dilated; but what especially attracted attention was the proliferation of the bile ducts. In one portal space of average size we could count as many as a dozen, some cut transversly, others more or less obliquely. The smallest were formed of a single row of cells, and had no lumen. The largest were full of desquamated cells, and around them the embryonal connective tissue showed a tendency to form concentric fibrous zones so as to make an envelop whose thickness equalled the lumen of the vessels. In certain points these fibrous investments were perforated obliquely by little ducts which emptied into the larger ones. There existed then an angiocholitis which was very marked, and the connective tissue proliferation seemed to be dependent on this lesion, as the sclerosis was developed around the bile ducts. Besides these lesions of the portal spaces we observed a very remarkable alteration of the hepatic cells in the centre of the lobules; they had become fatty; only the peri-portal islets were healthy. We found islets of veritable necrosis where the hepatic cells become granular, turbid, and fragmentary, no longer had nuclei which could be stained by by hæmatoxylin or by carmine alum.

In presence of this lesion, I do not hesitate to pronounce it to have been a case of biliary cirrhosis from the start. It has been impossible to stain microbes in sections, and yet these islets of necrosis bespeak with almost certainty an infectious disease. The question now comes up: Why did our patient die so quickly from lesions which had not yet had the time to develop?

Now you should know that pregnancy singularly aggravates the prognosis of cases of icterus; it is, moreover, a predisposing cause of this affection. The liver becomes certainly a *locus minoris resistentiæ* in the pregnant woman, and presents then a favorable soil for divers infections. Moreover, this woman was already worn out by a previous painful pregnancy, and the vomitings from which she had suffered from the commencement of the last pregnancy had brought her to a state of pathological depravement which took from her all vital reistance; it is not then surprising that the hepatic cells became very vulnerable to morbific agents. Lastly, her kidneys were not in good condition, and the microscope has already shown us the existence of an interstitial nephritis considerably advanced, dating perhaps from her first pregnancy; besides the convoluted tubes presented a recent alteration in relation with the icterus; the epithelial cells were degenerated and their nuclei would no longer stain by hæmatoxylin, a new reason for suspecting the infectious nature of these accidents.

In brief, we had to do with a pregnant woman in a state of physiological depravement, presenting lesions of both kidneys, who succumbed rapidly in the course of an icterus symptomatic of a chronic angiocholitis which did not have the time to end in cirrhosis.

In concluding, I must remark the singular localization of the alterations of the cells in the centre of the lobules, far from the nutritious vessels; we cannot but assimilate this case to the peri-suprahepatic steatosis described as of occasional occurrence during pregnancy, and especially during lactation.

To sum up, in these two patients you get a clear notion of the two modes of evolution of angiocholitis.

In one of these modes (as those in the first patient), an obstruction of calculous origin furnishes the condition for certain micro-organisms to proliferate in the bile ducts,—and I have explained the relationship which authorities admit between latent microbism and biliary lithiasis—then, in con-

sequence of the septic biliary stasis, an ascending angiocholitis is developed. From this moment, two interesting phenomena were furnished; on the one part, an early infection of the blood by reason of the erosion of the bile ducts in contact with the calculus, an injection which manifested itself by *the hepatalgic fever;* on the other part, by the degeneration of the hepatic parenchyma. Lastly, the kidney, in its turn, underwent a double process of degeneration by reason of the infection of the blood and the presence of soluble toxic products which were no longer destroyed by the liver. The two principal emanations were, then, suppressed. There resulted an accumulation of excrementitious principles in the blood, transforming gradually a benign into a grave icterus.

According to the other mode of evolution (*vide* Case 2), an angiocholitis, perhaps infectious but not calculous, propagates itself to the interlobular ramifications of the bile ducts, determines the proliferation of these canaliculi with consecutive connective tissue formation, and it would probably have terminated in the interstitial lesions of biliary cirrhosis if the unwonted aggravation resulting from pregnancy had not arrested the process at the onset of its evolution.

Paris, France.

ALIMENTATION AND ARTIFICIAL FOODS.*

BY F. C. HERR, M.D.

Prior to the time that physiologists came to regard life processes as an even balance between constructive and destructive metamorphosis in the tissues—the blood included—the problem of scientific feeding did not seriously enter into the subject-matter of the physician's thought. The inspiration of the practitioner then was the empiricism of the past, and to deplete our ensanguinated system, to rouse into activity a torpid liver, to lull pain and soothe disquiet with strong opiates, fulfilled the indications of scientific therapeusis. But the evolution of a great science has changed all this; the tyranny which that opinion exercised over the professional mind was abolished by the genius of a man whom we all honor in our daily professional life. I refer to Dr. Robert Graves. He made the world his debtor when he said to his pupils: "If you are at a loss for an epitaph to inscribe on my tomb, you may use these words—'He Fed Fevers.'" It is well sometimes to go back and look over the work of the masters, to impress more firmly upon the mind those great principles of our science which constitute the cornerstone of rational and scientific medicine. Dr. Graves saw, in advance of other men, the disasters of protracted abstinence, and in language strong and eloquent he urged systematic feeding as the sheet-anchor of the physician's hope in exhausting diseases.

I quote one brief passage from the work of Dr. Graves:

"Now, in a person laboring under the effects of fever and protracted abstinence, when sensibilities are blunted and where functions are deranged, it is not at all improbable that such a person, perhaps also suffering from delirium and stupor, will not call for food, though requiring it; and that if you do not press it on him and give it as a medicine, symptoms like those which arise from starvation in the healthy subject may supervene, and you may have gastro-enteric inflammation or cerebral disease as the consequence of protracted abstinence.

"You may perhaps think that it is unnecessary to give food, as the patient appears to have no appetite and does not care for it. You might as well allow the urine to accumulate in the bladder because the patient feels no desire to pass it. You are called on to interfere when the sensibility is impaired and the natural appetite is dormant, and you are not to permit your patient to encounter the horrible consequences of inanition because he does not ask for nutriment."

What a splendid plea for enforced feeding! It has proved an inspiration to medical teachers, and has filled with new hope and endowed with new resources the medical practitioner.

The dynamic forces of life are preserved through the maintenance of effective nutrition. It is an axiom of physiology, that not what we eat, but what we digest and assimilate, conduces to the upbuilding of the body and the support of life. "From the food the blood is fed; from the blood the tissues are fed." A simple proposition is this, but it embodies a vast deal of medical philosophy. Roughly stated, it might be said that the

*Read before the Kansas State Medical Society, at Wichita, May 15th, 1891.

order of sequence in the construction of a vigorous body is: Good food, good blood, good tissues.

The progress of knowledge has disclosed this vital truth in relation to organic functions, namely, diseased action is not exalted vital force, and the paramount indication in all forms of disorder is the maintenance of the highest possible degree of healthful nutritive activity. To fail to take cognizance of this is to abandon the most potential lever that science furnishes for the successful combating of disease.

As that ensemble of physiological phenomena which we call life is the resultant of chemico-vital changes in the food, and primarily it follows as a corollary that too great care cannot be exercised in the selection of nutriment. In it are the potentialities of life; in it may lie concealed, in unassimilable elements, the possibilities of gradual but inevitable decay. Dr. Lauder Brunton affirms that the mal-products of nutrition are positive depressant poisons. Physiological experiment confirms this, and the observations of the clinician give equal strength to the statement. Lives have been sacrificed to ignorant and injudicious feeding, and the administration of drugs often does not so much tax the skill and knowledge of the physician as the administration of food.

Here I am confronted with the very practical question of specific form and variety of food. And I may premise what may follow with the statement that a variety of elements enter the inter-question of suitable food. First, the quantity of food as to purity and freedom from adulterations; second, its nutritive value; third, its digestibility; fourth, its palatability. Looking carefully over this order of arrangement in the essential qualities of suitable food, I am reminded that palatability is an element of such vast importance that it should perhaps be given in the first place, in order. The therapeutist has indicated the necessity for good foods, and the chemist's art has placed at his disposal one after another of much vaunted nutrients, and still the question confronts us: Has science furnished us with a food that will meet the indications for nutriment in a wide range of morbid states—a reliable food — easy of digestion, readily assimilable, agreeable to the taste, and with all such efficient in nutritive material.

The dietetics of the sick-room, like all things else, change. It is within the memory of men young in the profession, when beef-tea and beef-essence, in the minds of the laity, possessed more importance than the physician with all his resources. And a prejudice still lingers with many people, and with some physicians, in favor of these once much used and much esteemed aliments. But the educated physician sees in them little more that the merits of a placebo, and the consensus of enlightened judgment is in favor of forms of artificial food that have been shown by analysis to possess in large degree, and in readily assimilable form, all the constituent elements of the human body. The busy life of the average practitioner does not afford time or opportunity for the investigation of these special subjects, and in the belief that the ends of scientific medicine will be there subserved, I desire to submit to your consideration some facts which I have collated respecting the comparative merits of a variety of artificial foods. In doing this I desire to emphasize one obvious truth, namely, that all artificial foods are made with the paramount design to sell.

And it is the hope of their manufacturers that the medical profession will find in them enough of merit to justify their endorsement. The interest of the physician lies in restoring health to the sick and afflicted; the interest of the manufacturing chemist lies in creating a market for his products, whether they be good, bad, or indifferent.

I have an abiding conviction that the highest interests of our patients are often sacrified to a credulity which compromises our best judgment in these matters. The best medicine is not a whit too good for our poorest patient, and only the best food should receive our endorsement. It is furthermore incumbent upon us as educated men, charged with grave responsibilities, to know that what we do use is the best obtainable.

But what is the best? In regard to the matter of foods, I have secured the analysis of nine varieties or brands of artificial food, the Mosquera's Beef-Meal, Armour's Extract of Beef, Liebig's Extract of Beef, Beef Peptonoids, Wyeth's Beef Juice, Valentine's

Meat Juice, Cibil's Fld. Ext. of Beef, Bush's Bovinine, and Murdock's Liquid Food. These foods comprise the best known and most favored preparations upon the market. They are all candidates for our support. They come to us highly lauded—all of them—by their manufacturers. Some are good, some indifferent, some worthless. Some will render great service in times of dire need, others, with much of promise, and more of parade, will be found barren of life-giving qualities.

The mal-products of nutrition, as Dr. Brunton observes, are depressant poisons. Urea, whether elaborated within or without the system, is a physiological poison. The same is true of creatin.

ents. Dr. Fothergill has cast deserved imputation upon this class of foods, by declaring that they do not possess much more nutritive value than concentrated urine. But, in addition to the unavailable nitrogen, these extracts contain a large percentage of moisture and mineral matter, and are devoid of fat and peptones.

The Beef Peptonoids are shown by analysis to be a most inferior food. They have always stood in favor with the profession. The suave emissaries who so generously enlighten us upon these matters always assure us that Beef Peptonoids represent five times their weight of nutritive value in beef and milk. The table shows that it is

Brand.	Moisture.	Fat.	Mineral matter.	Phosphoric acid.	Total nitrogen.	Total proteid or albuminous matter.	Peptone.	Contents (weight) of each package.	Retail price.	Comparative value, based on total albuminous matter.	Equivalent of each package in raw beef, based on total albuminous matter.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.				av. ozs.
Mosquera's Beef Meal ...	8.81	10.54	4.02	1.67	12.5	78.12	27.17	8 av. ozs.	$0.50	$0.50	32
Armour's Ext. of Beef ...	24.9	Trace	22.5	6.82	9.24	57.74	None	2 av. ozs.	0.50	0.0925	6
Liebig's Ext. of Beef	21.4	Trace	22.5	6.36	9.18	57.37	None	2 av. ozs.	0.50	0.0925	6
Beef Peptonoids	10.0	3.7	4.6	1.7	3.85	24.06	Trace	6 av. ozs.	1.00	0.0115	7.5
Wyeth's Beef Juice	51.4	None	19.25	2.38	4.48	28.00	None	1.75 fld. ozs.	1.00	0.05	2.5
Valentine's Meat Juice...	60.8	None	7.5	3.18	3.41	21.31	0.51	1.75 fld. ozs.	1.00	0.035	2
Cibil's Fld. Ext. of Beef.	57.2	None	20.25	3.68	3.64	22.75	Trace	2.75 fld. ozs.	0.60	0.0475	3.25
Bush's Bovinine.....	83.1	None	0.8	Trace	2.4	15.00	None	5.75 fld. ozs.	0.60	0.075	4.5
Murdock's Liquid Food..	84.6	None	0.5	Trace	2.13	13.31	None	5 fld. ozs.	0.55	0.0525	3.5

A reference to the attached table will show that Liebig's Extract of Beef, and Armour's Extract of Beef, contain nine and a fraction per cent. of nitrogen—a very fair percentage. But it would be an error to accept this as representing the actual percentage of *available* nitrogen in these products. In the Liebig process of manufacture, the meat is simply treated with either cold or warm water, and the extracted matters contained in the resulting solution subjected to evaporation, leaving a paste containing all the soluble constituents of the meat, without any, or very little, of the proteid matter. The percentage of nitrogen designated in the table is, therefore, misleading, as it exists in the form of urea and creatin largely. The Armour's Extract of Beef is prepared in the same way, and contains the same effete nitrogenized constituents free from peptone, hence its albumen, from whatever source it is derived, is in a crude condition, and has never been subjected to a peptonizing process.

In the percentage of proteid matter Beef Peptonoids compare unfavorably with other preparations of the list, while more than 50 per cent. of the preparation is soluble in water, and resembles dextrin, plainly indicating that the starch has been largely converted—no matter from what source derived, but probably by cooking ordinary wheat flour. Beef Peptonoids are inferior in real nutritive value to the foods made after the Baron Liebig process.

I do not feel that much could be gained by elaborating upon the individual articles named in the table. It indicates at a glance the comparative nutritive value of these foods. But I cannot dismiss the subject

without a reference to powdered beef, and Mosquera's Beef Meal and Beef-Cacao. You are quite well aware that powdered beef is simply the residue left after extracting the meat with water.

In the manufacture of Liebig's Extract a vast quantity of material accumulates, and the profitable disposition of this has lead to the production of powdered beef. This preparation has the endorsement of some eminent therapeutists, among them Dujardin-Beaumetz, and in reality it is a concentrated food, differing from beef, which contains 75 per cent. of moisture, it containing none, while at the same time it is free from the inorganic salts which are so essential in the digestive process. It is just as much of a tax upon the digestive functions as pure beef, and all things considered, it is less desirable as a food, especially in conditions of enfeebled and disordered digestion.

Mosquera's Beef Meal and Beef Cacao are among the newer candidates for professional favor. They have already received the endorsement of reliable, and competent observers. Prof. Crittenden, of Yale College, has made a careful analysis of Beef Meal, and he estimates its nutritive value at least six times its weight in lean beef.

Dr. Martin, chemist of the Health Board in New York, as also Dr. Justus Wolfe, of the same city, estimates it to be ten times as nutritious as the natural meat. Prof. John Attfield, London, England, testifies that a personal examination made by him of Beef Meal shows that it is superior to any preparation to which his attention has been called.

Here let me remark that Beef Meal is not a ready prepared food. It is entirely wanting in flavor and seasoning. These you must supply just as you would in the case of beefsteak. Your mastery of the cuisine will determine in a large degree the measure of utility in this food, as it is not contraindicated in any condition of morbidity—it is equally applicable in simple indigestion, and in typhoid fever. The mode of preparation of this food is opposed to the Baron Liebig process which assumes that the extracted and soluble principles represent the nutritive wealth of the beef. The fact is that the nutritive value of these extracts has never been established until now, and their clinical worth has been wholly a matter of assumption.

When the residue, left after extraction by the Liebig process, is subjected to the action of pepsin and pancreatin, it is dissolved and converted into peptone—thus showing that nature meant it for a food, and that it is in reality the nutritive portion of the beef.

In the preparation of Beef Meal nothing is taken from the beef but water, and nothing is added to it except a small percentage of extractive matter contained in the juice of the plant used in the peptonization of the albuminous constituents of the meat.

As in most forms of sickness the balance between waste and repair is lost, the consumption of tissue accelerated and emaciation with prostration ensues, it becomes imperative to supply the economy with such food as will repair the waste, give strength to the enfeebled tissues, and furnish fuel for the consuming fire. I do not know of any food that will do this in the same measure that Mosquera's Beef Meal will. The comparative value of this food is shown in the table.

My attention was called to the Mosquera foods early in the history of their introduction, and I have faithfully tried them in a variety of disorders—always with good results—sometimes with surprising ones. I have no hesitation in affirming that as a food, and a medicine in all forms of dyspeptic derangement, Beef Cacao has no equal. Not that it will speedily and certainly restore to health every subject of these disorders, but that it will, in the majority of cases, afford relief, and in a large percentage effect a cure.

If after your accustomed morning meal you go to your labor with a feeling of languor and apathy; if you feel as the dyspeptic usually does, borne down by an invisible load of something; just mix with a cup of hot milk one tablespoonful of Beef Cacao for your breakfast meal, and you will go to your daily task with a clear head and a light heart.

A great multitude of slight ailments are directly traceable to enfeebled digestion and impaired assimilation. The pathogenic condition here is subnormal nutrition—the result of excessive ingestion of coarse and non-

assimilable food. Here Beef Meal, alternated with Beef Cacao, will soon change the complexion of things. I cannot stop to consider or indicate these special conditions; they are legion; but Dr. Lionel S. Beale, in his "Slight Ailments," has passed them all in review, and had he known then that the plodding scientist would soon place at our disposal such foods as these, he would have urged their use.

You are well aware that nutriment may be furnished to the body, and life sustained, without the use of the digestive organs proper. The mode of alimentation by enemata, since the introduction of Beef Meal, has grown to be a most satisfactory method, indeed. The Mosquera foods are so thoroughly adapted to every purpose of easy assimilation that nutrition is accomplished by absorption, as distinguished from digestion, with surprising facility.

I am well aware that the employment of nitrogenized food in febrile diseases is hardly in consonance with the orthodox practice. But we are not obligated to orthodoxy. Besides, the latest scientific and clinical researches refute the theory that animal foods are contra-indicated in febrile states. The excretion of nitrogenous products is much increased in all forms of pyrexia, and reasoning *a priori*, the conclusion would be inevitable that as nitrogenous metabolism is already excessive it would be injudicious to introduce into the system yet more nitrogen. But the experiments of Immerman, confirmed later by Bauer and Kunstle, entirely subvert this theory, and expose the fallacy of such reasoning. These investigators have shown that in typhoid fever albuminous food is beneficial, not because it diminishes the excretion of nitrogen, but because it supplies this element to the fevered tissues, and "nitrogenious foods alone are capable of being converted into the albumen and fibrin of the blood, and thus assimilated by the tissues."

In all forms, therefore, of protracted pyrexia, Mosquera's foods are invaluable. Small quantities of Beef Meal frequently administered will supply to the economy a large percentage of tissue-forming elements, and it will be demonstrated in the near future that not only must fevers be fed, but the food supplied must be of the character here indicated in order to achieve the best results. Let not the bias of early teaching stand in the way of accepting new doctrine. If men always conformed to precedent and experience, the march of progress would be slow indeed.

In the manifold forms of bowel derangement so common in miasmatic regions, these foods will be found available. In actual dysentery I have employed them with excellent results. Being largely predigested and easy of assimilation, they are not contra-indicated in any condition. Only one exaction do they make of the physician, namely, that they shall be seasoned to be made acceptable to the patient. The same is true of almost every other food, and while this labor and skill is being expended, it is as well to expend it upon foods of superior merit. In current medical literature I see reports of cases of pulmonary consumption treated by Profs. Gibbes and Shurly with iodine, and gold and sodium chloride, hypodermatically, and chlorine gas locally, with a reliance upon Mosquera's foods for adequate nutriment. Whatever influence any system of medication may have upon the pathology of tubercle, all will admit that the profound disturbance in the nutritive processes in this disease appeals to our knowledge and skill for prompt and efficient relief. And to-day, if I were placed in charge of consumptive patients exclusively, and given my choice between drugs and foods as exclusive agents in their management, I would say give me the foods.

What are the diatheses and cachexia that haunt the doctor's mind? What do they require at our hands for their eradication? Medicine? I imagine not. More of sunlight, more of fresh air, more of judicious exercise, and, greater than all, *more of good food* is the *sine qua non* of substantial amendment in them. So the good results obtained by Profs. Gibbes and Shurly might, perhaps, with strict propriety, be ascribed to the judicious use of good food.

After all, what is every disease but some modification of nutritive function; in its final analysis every morbid process is some derangement, slight or grave, in the up-building forces of the economy.

Dr. Frederick I. Knight, before the Climatological Association at the 1890 session, said, "at present, the usual preparation of food is so bad that after one has found out the class of nutriment a patient requires it is well-nigh impossible to secure it to him."

It is beyond question that these foods—Beef Meal and Beef Cacao—are the best artificial foods yet offered for use.

As the table shows only the composition of Beef Meal, it may be here remarked that Beef Cacao comprises equal parts of Beef Meal, sugar, and Dutch chocalate, so that it is about one-third the food-value of beef-meal.

In nursing women, Beef Cacao meets the indications of an ideal food.

In surgical practice, where the problem of dietetics is important, these foods must find a wide range of applicability.

In the multiform neurasthenic conditions of women, they are highly serviceable where tissue-waste exceeds repair, and where repugnance to food appears a constitutional quality.

The physician can choose from a multitude of drugs and foods that which he will use, but duty bids him to employ only those that *are* good—duty to the sick and suffering and confiding public.

Ottawa, Ks.

THE TREATMENT OF PERTUSSIS.*

BY LOUIS A. FRARY, M.D.

The late beloved Dr. James Allen, President of Rush Medical College, was once asked, "What is the proper treatment for diphtheria?" With characteristic brevity he replied, "It depends upon *what is the matter*." So, in considering the subject of the proper treatment of whooping-cough, the first step towards a successful solution of the problem would be to find out "what is the matter." And being satisfied upon that point, we may proceed to select the various remedies and measures which may be used with greatest promise of success in the treatment of the disease.

Whooping-cough has been defined to be: "An acute contagious disease, attended and manifested by a catarrh of the air passages and a peculiar and characteristic cough." It is a contagious disease, therefore dependent for its manifestations upon some specific poison or germ, capable of being conveyed through the air from the diseased mucous membranes of the affected individual to a like location in a healthy person, and there reproducing the disease. About the year 1870, Leitzrich supposed that he had found the specific germ of pertussis in a fungus which, received upon the surface of the air passages, multiplied rapidly and produced the catarrh and the spasmodic cough by its irritant properties. His statements have been verified by many later observers, principal among whom are Burger, Poulet, Buhl, and Oertel. In its earliest stages, then, the disease is evidently local, and caused by a vegetable micro-organism, but that it does not long remain local, cases related by Drs. Rilliet and Barthez, Keating and Ewell, furnish abundant proof. They relate instances where a pregnant woman has been affected with pertussis and given birth to a child, which from the time of its birth suffered from convulsions and spasmodic seizures identical with those of whooping-cough. The child could only become infected with the specific germ of the disease through the general blood current of the mother, proving conclusively that in its latter stages, at least, it is a constitutional disease. The germ obtains lodgment upon the mucous membranes of the air passages, multiplies with extreme rapidity, produces a catarrhal inflammation, and from this source the poison is absorbed into the general blood current, and the whole system infected.

Pertussis in its course has been arbitrarily divided into three stages:

1. Catarrh of the air passages.
2. Spasmodic cough.
3. The decline of the disease and return to health.

In the first stage the treatment should be nearly the same as for a mild idiopathic catarrh, consisting of gentle expectorants, guarding against complications by keeping the patient clothed in woolen garments, attention to the digestive and intestinal functions, and all those hygienic measures

* Read before the Central Wisconsin Medical Society, September, 1891.

which preclude the possibility of taking cold. Should there be much bronchitis with accelerated breathing, frequent cough and fever, mild counter-irritation of the chest, the use of an oil-silk jacket, and a few minims of tincture aconite, will probably give relief. There is one other indication for treatment which I think very important. There is a specific germ in the air passages, irritating the delicate membranes and causing the disease. We should endeavor to find some agent capable of neutralizing and rendering inert this poison. The means by which this can be accomplished are vapor inhalations charged with some antiseptic. By this means the vapor is brought in direct contact with the diseased surfaces, and its action is more certain than any internal treatment can be. This treatment should be begun in the first stage of the disease, but becomes far more important in the second. This is the time of danger to the patient.

The specific principle of pertussis causes but little depression of the vital powers. It affects the system injuriously through the severity of the spasmodic cough, the vomiting and consequent loss of nourishment, and the complications which frequently occur, some of which involve fatal consequences. A remedy is required which will diminish the sensitiveness of the laryngo-tracheal surface. and destroy the germ of the disease in this location, where its local manifestations occur. Such an agent we have in carbolic acid, inhaled from a steam atomizer for three to six minutes every two to six hours, according to the severity of the cough. An alkali combined with the carbolic acid is more efficient, as it renders the mucous more fluid. The following prescription has given valuable results:

℞ Ac. carbol. (cryst,), gr. iij.
Sod. biboratis,
Sod. bicarb., ää ʒ i:
Glycerini,
Aquæ, ää ℥ i.
M. Sig.—Use in steam atomizer.

Another agent which has been used with considerable success in the treatment of pertussis is peroxide of hydrogen. This should be frequently and copiously sprayed upon the mucous membrane of the nose, throat and pharynx, and also inhaled from a hand atomizer,—it should not be used with a steam apparatus as the heat breaks up the chemical combination of the drug. It is one of the most powerful of antiseptics, and being perfectly harmless when swallowed, there is no danger attending its use. Internal remedies once principally used, now occupy the second place in the treatment of complicated cases of pertussis. Of this class belladonna stands at the head and can, without doubt, be used in many cases with decided benefit. Brown-Séquard, in remarks made before the American Medical Association in 1860, claimed that the duration of pertussis, so far as its nervous element is concerned, might be abridged by its use. It certainly will, in some cases, control or diminish the spasmodic cough. Children require very large doses, a child of two years taking three drops of the tincture, and one of six to eight years, eight to ten drops. Quinine has also been used extensively since Leitzrich discovered the bacterial origin of the disease. Its good effect, however, is probably due to the fact it diminishes reflex irritability. As yet we have no agent which can search out the germ of the disease in the general blood current and destroy it without also destroying the patient. Quinine also acts as a tonic and improves the appetite. It is unquestionably the remedy to use where febrile complications occur from bronchitis, pneumonia, or other causes. A child of five years should take two grains, four times daily, or if used as an antipyretic a larger dose may be required. For this purpose analgesin may also be used, though it is more of a depressant than quinine. Nearly every drug in the Pharmacopœia has been used at various times in the treatment of pertussis, notably those of the anti-spasmodic group. Of this class I would mention hydrocyanic acid, hydrate of chloral, cannabis Indica, hyoscyamus, the bromides, chloroform, and musk. Any one of these may be useful in treating the ever varying phases of the disease. One of the chief dangers in pertussis is from eclampsia, and from passive congestion of various organs, especially the brain. When there are any symptoms indicating the approach of these complications, bromide of potash or soda should be given in sufficiently large doses to quiet reflex irrita-

bility and de-congest the nerve centres. From this action the bromine compounds are of great benefit in most stages of the disease. In the treatment of cerebral accidents, chloral and hot foot baths are also of service. Opium and belladonna should seldom be used in the first stage.

One of the most frequent complications that we are called upon to treat is pneumonia. Whenever the child feels ill, between the paroxysms the chest should be thoroughly examined, and if pneumonia or bronchitis be found, it should be covered with a flax-seed poultice containing one-sixteenth part of mustard; quinine with ammonia and alcoholic stimulants should be given at regular intervals. Alum has been recommended as being of great service by Meigs in his "Diseases of Children," one to four grains every four hours. The French Academy of Medicine recommend the inhalation of coal gas. Ergot, assafœtida, arsenic, nitrite of amyl, and jaborandi, all have had their advocates and are probably of service in some cases. During the third stage, that of the decline of the disease and return to health, tonics such as iron, quinine, and cod-liver oil are indicated, and in fact may be beneficial through the entire course of the disease. Plenty of food, fresh air and sunlight are very important elements in successful treatment.

With regard to prophylaxis and quarantine, I find a difference of opinion among the authors I have consulted. Some state that the germ of the disease can be carried from person to person in the clothes, others that it cannot. At all events, healthy children should not be allowed to take the breath or mingle with those suffering from the disease. It is not, however, necessary to quarantine as strictly as for diphtheria, scarlet fever and some of the more dangerous contagious diseases.

In conclusion, I would say that he who pins his faith to a single drug or method of procedure expecting to be successful in all cases, will inevitably be doomed to disappointment, while he who endeavors to understand clearly each individual case, and, instead of pursuing a routine treatment, thus to treat "what is the matter," will be crowned with success.

The time-honored treatment pursued so froquently by the laity, viz., letting them *whoop*, will probably obtain in most cases for some time to come.

Oregon, Wis.

Correspondence.

NEW YORK LETTER.

The Abuse of Medical Charity—Anchylosis of the Tempero-Maxillary Joint Following Gonorrhœal Rheumatism—An Encysted Bullet in the Brain—A Suspended Animation.

Medical Charity. — Periodically, in New York, comes up the question of the free treatment of patients in the dispensaries and out-door departments of the hospitals. At a meeting of the Society of Medical Jurisprudence last Monday evening, Dr. W. H. Bates read a paper entitled "The Abuse of Medical Charity." He stated that this abuse existed not only in New York and other large cities in this country, but also in Europe. In the year 1872, one-third the population of London received gratuitous medical treatment. In 1890 this proportion had increased to one-half. About one-half the population of Edinburgh are treated without pay. In New York there are about fifty hospitals and thirty dispensaries. In these institutions, in 1890, 550,000 persons received free treatment, and this only includes new patients, and does not include the thousands who are treated by the Health Board of the city. The proportion is about one to three; more than one-third of the population of the city of New York ask and receive free medical treatment. The amount of free work done in the hospitals has increased 90 per cent. in the last ten years, while the population has increased less than 50 per cent. Medical charity, Dr. Bates said, is the free treatment of patients who are unable to pay a physician, and he included in this class all persons whose income was less than $500 per annum. Investigation by the New York Charitable Society has proven that fifty per cent., and in some localities as high as eighty per cent., of the applicants at the dispensaries, etc., are unworthy of this charity. These facts were ascertained by visiting the homes of the patients. In twenty to thirty per cent. the applicants gave wrong addresses and made other false statements. Indiscriminate medical charity, it has been shown, tends to pauperize classes, leading them to solicit aid in other directions.

As a remedy for the abuse, Dr. Bates

recommended that it be a misdemeanor for any person to make false statements in soliciting medical aid at these institutions.

The discussion following the reading of this paper was very animated. The general opinion seemed to be that the dispensaries and out-door hospital departments should be abolished entirely, and a motion was carried requesting the Trustees of the Society to petition the Legislature to pass a law making it a penal offence to endeavor to obtain free medical treatment under false pretences. One legal member of the Society said that while they had no free law dispensaries, he thought that by abolishing dispensaries the doctors would "wrest from their profession the grand element of charity."

Apropos the following letter appears in the Medical Record:

"While the matter to which I desire to call the attention of the medical profession is by no means one which has not been discussed before, the abuse is being carried to such an extent at present that I think some remedy is called for. I refer to the free treatment of patients—especially in the large cities. A visit to one of the dispensaries or out-door departments of the hospitals or post-graduate schools in New York, will convince anyone that hundreds of patients are receiving free treatment there daily, who can well afford to pay for it. None suffer so much from this abuse as the younger members of the profession, who, after giving their services gratis for a year or two at some hospital, open an office only to find that many of the patients who legitimately belong to them are receiving free treatment in the dispensaries, etc.

"There is no profession where so much work is done for 'sweet charity's sake' as in medicine, and this is quite right; but the line must be drawn somewhere, and it lies within the power of the medical press and societies to deal with this question. The remedy, I fear, has not yet been discovered, but as a possible step in that direction, I would suggest that before any case is treated at these places, the patient must present a certificate from a reputable minister or physician, or from some public or private charitable institution or society, stating that he or she is deserving of free treatment. Perhaps an expression of opinion on this point from other physicians would be of interest."

Anchylosis of the Tempero-Maxillary Joint, Following Gonorrhœal Rheumatism.—Dr. R. W. Taylor, at one of his recent clinics, presented a young man who gave a history of gonorrhœa followed by gonorrhœal rheumatism in all the large joints in the body. The inflammation of the tempero-maxillary joint persisted, and was followed by an anchylosis and fixation of the jaws. The patient is only able to introduce small particles of solid food into his mouth, and swallows with great difficulty. His condition, Dr. Taylor said, can only be relieved by a surgical operation.

An Encysted Bullet in the Brain.—At the Surgical Section of the Academy on Wednesday evening, Dr. John W. Wyeth presented a little lad who, about a year ago, met with a pistol shot wound of the brain, the ball entering at the forehead, near the center. The wound was made by a 22-calibre ball, from a pistol or parlor rifle. The boy was kept quiet for several months after the accident, Dr. Wyeth stated that the bullet, which he still carries in his brain, has no doubt become encysted. The boy is still in perfect health, and in full possession of all his faculties.

A Case of Suspended Animation.—A singular case has just been reported in Jersey City. A colored man named Brown, an inmate of the Hudson County jail, was pronounced dead and removed to the morgue. At the morgue signs of animation were discovered in the supposed corpse, and the man was at once sent to the City Hospital, where he was found to be in a state of collapse, the body being cold, the pulse hardly perceptible, and the temperature a fraction below normal. Restoratives were applied and the man revived. The next day he refused all nourishment and became so violent that he was transferred to the insane asylum, where he is at present. The most curious part of the affair is the fact that the body was transferred from the jail to the morgue in an air-tight box.

MICHIGAN STATE BOARD OF HEALTH.

The State Board of Health convened at Lansing, Oct. 13th, 1891.

The Secretary presented letters from the Mayor and others, and a numerously signed

petition from citizens of Iron Mountain, setting forth their city is suffering from a serious epidemic of typhoid fever, 436 cases and 32 deaths from this disease having occurred from Aug. 7th to Oct. 6th, and asking that the State Board hold a Sanitary Convention there for the purpose of aiding in stamping out the epidemic, and stating that Iron Mountain had raised $250 for defrayitg the expenses of such Convention. Although petitions for conventions at Holland and at Charlotte had precedence, on account of the very serious situation at Iron Mountain the Board decided to accept the invitation, and hold a Convention there October 30th and 31st.

The Board also appointed a committee to investigate an outbreak of diphtheria at Imlay City and vicinity, from which upwards of 70 cases, with 14 deaths, were reported to have occurred since August, 1890.

The Secretary presented a report of typhoid fever in Deerfield township, where about 26 cases and 7 deaths were reported since August 20th, 1891.

Correspondence relative to a suspected case of leprosy in Michigan was presented, and also the reported casualties from kerosene oil during the past quarter.

In the report of work done, the Secretary mentioned the Office had taken action relative to 492 outbreaks of dangerous communicable diseases during the last quarter, and 1,120 letters had been written.

He also stated that, although statistics show that through health measures—chiefly isolation, disinfection and vaccination—there has been recently a reduction of at least eleven hundred deaths per year in Michigan from small-pox, scarlet fever, and diphtheria, there still remained seven thousand deaths per year from diseases known to be preventable through measures the knowledge of which is being spread by the State Board of Health. He thought an increase of the same work which has contributed to cause the reduction would be the most profitable use to which the people of Michigan could put a few thousand dollars, and that a further reduction in the deaths could be made by the constant employment of more persons in health work, one or two of whom could be employed by the State, to good advantage.

Prof. Vaughan spoke of a line of work which seems to be specially needed, viz.: An inspector to visit and aid localities to stop dangerous contagious diseases. Typhoid fever and diphtheria are epidemic in places too numerous to be visited by members of the Board, who, if they go, must leave their own business to work for the public without compensation. Something is being done now, but more ought to be done than can be done by members of the Board.

H. B. BAKER, Secretary.

THE METRIC SYSTEM IN THE U. S. CUSTOMS.

Editor MEDICAL AGE:

Dr. B. A. Gould, President of the American Metrological Society, writes from Germany that at the quinquennial session of the Geographical International Congress, held in Berne, August 10th–17th, there were about 280 delegates and representatives from all countries. At this Congress was passed the following resolution on August 14th:

"The Geographical Congress entreats Englishmen of science to desist in future from the use of their ancient units of weight and measure in scientific and technical publications, and to employ those of the metric system only."

This resolution was passed with immense enthusiasm; the applause and cheering lasted for nearly five minutes, and the vote was unanimous.

In connection with this, allow me to state that the American Metrological Society has prepared a petition asking Congress to pass the following act:

"That on and after July 1st, 1893, the metric system of weights and measures authorized by the act of Congress approved July 28th, 1866, shall be used exclusively in the customs service in the United States."

Such petition we desire to circulate widely among those desiring to sign it, and we ask each signer to mail it to his representative in Congress.

The American Metrological Society has prepared a simple and excellent chart of the metric system, which, for educational purposes, it will mail to any one asking for it for the cost price, 10 cents in stamps. Address Secretary of American Metrological Society, No. 41 East 49th Street, New York City. Copies of the petition can be had at the same address.

JOHN K. REES,
Sec. Am. Met. Society.

New York, Sept. 24th. 1891.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., OCT. 26, 1891.

Editorial.

THE LIMITATIONS OF THE HEALING ART.

Prof. Nothnagel, in an address lately delivered before the Association of German Naturalists and Physicians, places this question upon its true foundation; and it is worth while to review his statements, since they clearly show to what extent modern medicine may claim to be the "art of healing," and in what direction its capabilities are limited. For the practice of this art, which owes its existence to the desire of humanity to escape from its inevitable heritage of pain, disease, and death, is in point of fact almost as powerless to actually cure disease as it is to prolong life beyond the allotted span. The aim of medicine really consists in averting premature death and in removing or mitigating the effects aud consequences of disease. We may call this "cure," but the use of the term in this connection is only euphemistic, as a little consideration will show. Yet, advance in therapeutics, especially during the latter half of this century, has never been more considerable; new regions, as in dermatology, ophthalmology, and laryngology, have been opened up; the domain of operative surgery and gynæcology has been enormously extended; numbers of powerfully acting drugs have been added to the materia medica, and the laws of physiology, dietetics, and hygiene have been pressed into the service of the treatment of diseases.

Prof. Nothnagel goes on to say that since the enunciation of Lister's "immortal" principle, and the practice based on it, and the cognate work of Pasteur and Koch, it would seem folly to declare that there are any limits to the art of healing, since the prospect of still greater gains in the future are so great. Verily the healing art has made great progress, and who can assert that it may not attain still higher levels.

Professor Nothnagel shows by a few examples that the art of healing consists, not in any direct influence upon the organism, but rather in the endeavor to place it in the best conditions for the natural processes of repair and restitution to take place. Antiseptic surgery has done much to enable operations to be undertaken with impunity; it does not directly influence the curative processes. A tumor may be extirpated or an abscess evacuated, but the cure of one or the other ensues through the operation of the physiological properties of the living cells. The healing of gastric or intestinal ulcers may be facilitated by removal of irritants in contact with them; but it takes place apart from any direct effort on our part, whilst no art can remove a clot from the brain or restore the damaged nerve substance. From such instances of the repair of solutions of continuity he passes to the subject of inflammation, acute as well as chronic, and shows that the same reasoning holds there. Our measures do not act immediately on the morbid processes. The use of cold in acute inflammation, of massage and electricity to "promote absorption" in chronic inflammation, are of great value in the relief of symptoms, in the removal of morbid products, etc., but are not directly *curative*. Still more evident are the limitations of the healing art in respect to degenerations and atrophy, to disorders of the blood or metabolism, and to the organic and functional affections of the nervous system. The specific diseases may be influenced in their course by symptomatic treatment, careful nutrition, and other measures; but with the exception of malaria and syphilis, and perhaps acute rheumatism, what cures are really effected by the means adopted? Indeed, in rheumatism, much at the salicyl treatment has mitigated pain and fever, it has no influence on the development of endocarditis.

Strictly speaking even a natural cure can only take place when a morbid process is active; when it has ceased to operate its effects are mostly beyond recovery. An acute pleurisy may be cured, but old pleuritic fibrous scars cannot; an endocarditis may resolve,

but valvular disease is permanent; renal calculus may be averted by treatment in the early stages of its formation, but surgery has to be invoked to remove it when it has once formed; an ulcer of the pylorus may heal, but a contracted cicatrix persists unchanged. Many other circumstances influence the possibility of a restoration to the normal, such as the suddenness or gradual evolution of the cause of the disorder, the locality affected, the persistence of the cause, the individual proclivity or disposition of the sufferer. In all these we have conditions which are truly *incurable;* but excluding them, we dare not say that there is any limit to curability even of malignant growths. The cure—that is, the restoration to the normal—of disordered function, degraded tissue, morbid chemical and physical changes—can, however, only take place through vital organic processes; and to medicine belongs the task of determining how these processes can be best influenced—in other words, what outside support can be rendered to the "vis medicatrix naturæ."

Nevertheless, certain of the drugs we employ do act directly upon the elements of the body; thus many alkaloids, and such substances as alcohol, chloroform, bromine, digitalis, influence nerve and muscle cells; pilocarpine, arsenic, and iodine affect glandular cells, and so on; yet the precise mode of their operation is unknown, and they can hardly be considered curative agents in the truest sense.

In fine, the physician has to be the servant and not the master of Nature, and by increasing knowledge of the processes and eventualities of disease he may come to understand how best to assist the natural efforts towards a maintenance of the normal equilibrium. But if he cannot directly cure disease, he can do much to protect the body against its invasion or neutralize the virus that causes it. Herein is found the application of therapeutics to bacterial diseases, as evidenced by sanitation and the procuring of immunity by vaccination—a principle doubtless applicable to numberless specific diseases. The principle of "protection" applies to other causes of disease than the bacterial—as, for instance, "chill"; whilst much has yet to be learned of the conditions which are favorable to the onset of such affections as granular kidney and leukæmia.

After all, a great deal can be done by symptomatic treatment, which has made vast strides of late, not only in relieving the sufferings of the patient, but also doubtless in expediting natural recovery. Thus, then, whilst it is folly to deplore the necessary limitations of the medical art, it is wisdom to clearly recognize them; and we may be assured that every advance in science must inevitably lead us onward in the practical application of such knowledge, and aid in furthering the great objects of our profession.

THE ADVANTAGES OF OLD AGE.

Better love's perfume in the empty bowl
Than wine's nepenthe for the aching soul;
Sweeter than song that ever poet sung,
It makes an old heart young!

—Oliver Wendell Holmes.

The London Lancet presents an address on this topic delivered by James Chrichton-Browne.

It seems a physiological law that the functions of the body must be kept in exercise in order to maintain their efficacy, and it is as true of the body as of the mill, or any other machine, that it will rust out from disuse sooner than wear out by employment. The fact is constantly observed in persons engaged in commercial pursuits, who retire at the age of 60, and then fall into rapid decay, whilst professional men remaining at work preserve their vigor, often for another twenty years. It is a sad thing to see the nerve centres decay with a corresponding weakness of body and mind, but it is still sadder to witness, with a wrinkling of the skin, a corresponding shrinking of the brain, allowing vanity, and some of the weakly passions which had been kept in suppression, to come again to the fore. How different is the spectacle when the organ is kept in its integrity by constant use, and the mental faculties preserved in all their pristine force. We have only to look around and to see our poets, bishops, judges, ministers of State, and medical men, long-lived and still in mental vigor whilst working at their respective avocations.

It is clear that hard work does not kill. The toil, however, must be genial and diversified. The man of business often has no occupation besides his bread winning, whereas a medical man has a variety of subjects to interest him. A speaker at the recent International Congress showed by experiments upon school children when three or four sums in arithmetic were given in succession, that each sum showed an inferiority to the previous one, both in correctness and as regards the time in which it was completed. The one faculty employed was gradually exhausted, a fresh piece of evidence showing the necessity for diversity of work. In the treatment of persons with mental trouble or worry, the very worst method is to rely too much on what is called rest, meaning thereby leaving the patient without other employment than to brood over his sorrows. True rest to the mind is only to be obtained by the occupation of other faculties roused into action by new surroundings.

There is no reason why old age should not be as happy and enjoyable as any other period of life. If old persons be asked as to their consciousness of age they will all, with one consent, declare that there exists nothing of the kind. An old person has a knowledge of his age in the same way as his friends; he sees it by looking in the mirror, by remembrance of past events, or the loss of contemporaries, but he is not constantly carrying about with him the conviction or feeling that he is old; he is thus still able to occupy himself in the business and pleasures of life.

Buffon spoke of his green old age as one of the happiest periods of his life, although the kind of pleasures then experienced are, of course, different from those of youth; and even when decay comes, and a man is becoming free from the remembrance of all earthly things, then, as Sir James Paget says (and no better example could be found of full mental activity by continued work), it may be so ordered on purpose that the spirit may be invigorated and undisturbed in the contemplation of the brightening future. Another writer, speaking of old age in reference to the decease of an eminent barrister, also maintained that the highest faculties are kept keen by constant exercise, and the brain vigorous by constant action and renewal. The understanding has often been in the highest perfection in quite advanced old age, and that has been the best period of human life. It is the time when the rage and storm of passion have died away, when the jealousies and cares of a career have ceased and been forgotten, when memory lingers upon all that is bright and charming in the past, and when hope scatters her most glowing tints over a fast approaching future; or, in the words of Sir J. Crichton-Browne himself, "We are able to see in old age glimpses of the truth that its chief glory consists not in the remembrance of feats of prowess nor in the egotistic exercise of power, but in the conquest of peevish weakness, in the brightness of hope, and in the discrimination of happiness around. Depend upon it, the best antiseptic against senile decay is an active interest in human affairs, and those keep young longest who love most. Cato learned Greek at eighty, and Sophocles wrote his Lives of Men when he had reached the age of three score years and ten.

THE SEVENTEENTH ANNUAL MEETING OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The seventeenth meeting of this Association is now history, and from reports received it exceeded all its predecessors in the number in attendance, the character of the papers read, and in social and scientific features.

St. Louis opened her arms and homes to the two hundred and forty physician visitors, banqueted them, and entertained them in the intervals of their business proceedings with drives, sight-seeing and proverbial southern hospitality.

Cincinnati was the place decided upon for the next meeting, Oct., 1892. The officers elected were:

Dr. C. A. L. Reed, of Cincinnati, President; Dr. E. S. McKee, Cincinnati, Secretary; Dr. C. S. Bond, Richmond, Ind., 1st Vice-President; Dr. J. H. Stucky, Louisville, 2nd Vice-President; Dr. Joseph Ransohoff, Cincinnati, Chairman Committee of Arrangements.

Of the social features the most notable were the receptions given to the members

by Drs. I. N. Love, C. H. Hughes, G. H. Bond; the luncheons given by Dr. Love at the St. Louis Club, and by Dr. Wellington Adams, at his home 2741 Olive St.; the drives through Forest and Tower Grove Parks; luncheon at the Jockey Club House; a general reception at the Museum of the Fine Arts, succeeded by a banquet at the Lindell interspersed with feast of reason and flow of soul.

During the meeting the International Medical Congress Committee met and elected officers:

The names are as follows: President, Dr. Wm. Pepper, of the Pennsylvania University: Secretary General, Dr. C. A. L. Reed, of Cincinnati; Treasurer, Dr. A. M. Owen, Evansville, Ind. Dr. Van Derveer, of Albany, N. Y., was chosen as a member of the International Executive Committee. The following were elected members of the Board of Trustees: Dr. P. O. Hooper, Little Rock, Ark.; Dr. H. O. Marcy, Boston; Dr. J. J. Kennedy, Des Moines, Ia.; Dr. H. D. Holton, Brattleboro, Vt.; Dr. A. Walter Suiter, Herkimer, N. Y.; Dr. W. T. Briggs, Nashville, Tenn.; Dr. Geo. F. Shrady, New York.

The following are the Chairmen of the different branches of the Congress: Dr. V. C. Vaughan, Ann Arbor, General Medicine; Dr. J. B. Hamilton, Chicago, General Surgery; Dr. G. M Sternberg, San Francisco, Military Medicine and Surgery; Dr. J. W. McLean, New York, Obstetrics; Dr. W. W. Potter, Buffalo, Gynæcology and Abdominal Surgery; Dr. J. B. Roberts, Philadelphia, Anatomy; Dr. Austin Flint, New York, Physiology; Dr. Samuel O. L. Potter, San Francisco, Therapeutics; Dr. F. S. Delafield, Philadelphia, Pathology; Dr. John M. Keating, Colorado Springs, Diseases of Children; Dr. Julian J. Chisholm, Baltimore, Ophthalmology; Dr. E. Fletcher Ingalis, Chicago, Laryngology; Dr. C. M. Hobby, Iowa City, Otology; Dr. A. H. Ohmann-Dumesnil, St. Louis, Dermatology; Dr. Ap. Morgan Vance, Louisville, Orthopedics; Dr. Stanford E. Chaillé, New Orleans, Hygiene; Surgeon-General Browne, United States Navy, Naval Hygiene and Quarantine; Dr. C. H. Hughes, St. Louis, Diseases of Mind and Nervous System; Dr. D. B. St. John Roosa, New York, Medical Pedagogics; Dr. F. W. Draper, Boston, Medical Jurisprudence.

A subcommittee is in charge of the work of nominating Secretaries, English and Spanish, for each section, with power to act, and they will probably report within the next month.

The regulations fix a fee of $10 for membership.

THE CELEBRATION OF VIRCHOW'S BIRTHDAY.

Virchow's seventieth birthday was celebrated in Berlin with the dignity becoming his years and the cordiality his achievements demand. A salon in the Kaiserhof was handsomely decorated for the occasion, and seated in it Virchow received the good wishes of thousands of his friends. There were present nearly all the prominent men of science in the city, while letters of congratulation, telegrams and cablegrams of remembrances, were received from distant portions of the globe.

Berlin conferred upon him the freedom of the city, and in his honor christened one of the finest streets Virchow Strasse; his medical colleagues presented him with a gold memorial medallion, bronze copies of which were sent to all institutions in Germany with which Virchow has been associated.

The press reports state that in spite of his long and arduous scientific labors, he is still hearty and hale at seventy, and pursuing his work with the same indefatigable energy that has ever characterized this vigorous leader of scientific thought.

The tribute paid him by greetings from the most distinguished and learned men of all nations on his birthday was regal, and he is indeed a king who stands high in the realm of intellectual achievement.

A SLANDEROUS ATTACK.

George Elliott compares gossip to the smoke of a dirty tobacco pipe, in that it proves nothing but the bad taste of the smoker.

One might equally well liken slander to the slimy viper who sucks the heart's blood that warms it into vitality.

Under the guise of an editorial appeal for the regulation of fees, the editor of the Medical Standard, of Chicago, publishes an unjust attack upon the venerable Dr. N. S. Davis, citing him as an example of fee cutting, and collusion with druggists for profit.

The following is *verbatim* the words of the editor of the Medical Standard, October, 1891:

Price-cutting is looked upon as an offense against commercial morality by those engaged in

mercantile pursuits, and it is certainly as derogatory to professional men. The matter has been much neglected of late years, but deserves much more attention than the turgid platitudinous resolutions so often quoted from the Code of Ethics about the duties of patients to physicians. *Perhaps the most notorious violator of medical ethics in this particular is a Chicago "father of the American Medical Association" who persistently advertises himself as charging low office fees while making up the difference by percentages on his multitudinous polypharmaceutical prescriptions.**

Editor and Publisher of the Standard both, should be held responsible for the vile aspersion of the character of one who has so long enjoyed the esteem of the most worthy element of the medical profession, and had showered upon him honors without number, evincing the general regard and reverence for him.

This is not the first evidence of the malignant rabidity of the editor of the Medical Standard, and not a few who have watched his course consider him of unsound mind.

The publisher of the Standard has certainly been most unfortunate in his selection of editors for the Medical Standard and Western Druggist, and if he be desirous of maintaining for his journals the continued support of the medical and pharmacal professions, he had better control the canine proclivities of his editorial staff—muzzle them, lest in their madness they run *amok* and are meted out a punishment fitting their conduct.

COMMON SENSE IN MEDICINE.

S. C. Gordon, M.D., voices this sentiment, which is worthy of repetition: A celebrated bishop, president of one of the most noted universities of this country, said to his class in divinity: "There are three things necessary for making a successful minister of the gospel: First, a thorough, liberal education; second, the grace of God; third, common sense. . . . . but unless you have the third born in you, may the Lord have mercy on your souls and the souls of your congregation." I know of no vocation where common sense is more necessary or important than in the study and practice of medicine. If I were asked to define the term common sense, it might be difficult; but it will be sufficient for our purpose, at the time, to say that it consists in applying rational, simple rules of construction to the various theories of medical science.

* Italics our own.

Book Notices.

ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By De Forest Willard, M.D., and Dr. Lewis H. Adler, Jr. Cloth; square 16mo.; pp. 144. Price 50 cents. Published by George S. Davis, Detroit.

The name of the chief author is sufficient guarantee of the character and scope of the work. Nevertheless, one is surprised on looking through its pages to discover how completely practical and convenient the volume has been rendered.

Naturally, the greater portion of the volume is devoted to consideration of the chief anæsthetics,—ether, chloroform, and nitrous oxide,—and their respective merits and demerits, including indications, general and special, for use or rejection, are carefully pointed out. The subjects are treated concisely, yet extensively and completely—all is said that need be said in a terse. compact, unmistakable way.

The lesser anæsthetics, however, are not neglected; alcohol, amylen, bromoform, ethylen chloride, ethyl bromide, methylen bichloride, all are discussed in proportion and according to their values.

Neither is the subject of local anæsthesia passed by, an entire chapter being devoted to cocaine, with indications for its use, and due warning of the dangers, even though remote, that may be entailed.

Another chapter is devoted to minor anæsthetics, such as brucine, drumine, carbolic acid, carbon disulphide, erythrophleine, rhigolen, even that rank fraud, gleditschine, a compound of cocaine and atropine, not being overlooked.

The three final chapters respectively discuss "Special Modes of Producing Anæsthesia"—by rapid breathing, by hypnotism, by electricity, hy intravenous injection, and by administration per rectum; "Artificial Anæsthesia in Obstetric Practice," and; "The Medico-Legal Relations of Anæsthesia."

As a whole, the volume is a real *multum in parvo*, for all of value and practical utility found in larger (and vastly more expensive) works, is compressed into its pages. It not only "meets a want," but supplies an actual need.

On the Medical and Surgical Uses of Electricity. By Geo. M. Beard, A. M., M. D., and A. D. Rockwell, A. M., M. D. Eighth edition; with over two hundred illustrations. Pp. 788. Wm. Woods & Co., New York. 1891. Price: Cloth, $5.50; sheep, $6.50.

Few physicians are acquainted with the technique of the application of electricity as a therapeutic agent. To undertake the practice of electro-therapeutics without a thorough knowledge of the fundamental principles and laws of electricity and magnetism, would be as absurd as to attempt to carry on chemical analysis without being familiar with the principles of chemistry.

In no science is a knowledge of general principles and natural laws so essential at every step as in electrical science. Its laws are multiple and varied, and a thorough understanding of them is necessary to a correct interpretation of the phenomena which manifest themselves in applying it.

Electricity is a definite quantity capable of producing with uniformity, certain physical, chemical and material changes, whenever we come to understand the laws governing its action, and learn to apply it with methods of precision.

The eighth edition of this well-known work has been revised by Dr. Rockwell. The chapters upon Diseases of Women, Electrical Apparatus, and Static Electricity, are largely re-written; additions are made to the chapter on Electro-Diagnosis; and throughout the work many new illustrations substituted for old ones. The chapter on the Dosage of Electricity is a subject of the greatest practical importance. The author calls especial attention to the new chapter on Physical and Physiological Activities of the Induced Current, in the light of the most recent knowledge acquired on the subject.

The Annual of the Universal Medical Sciences. Edited by Dr. Charles E. Sajous. F. A Davis, Publisher, Philadelphia.

This work, which consists of five volumes, is "a yearly report of the progress of the general sanitary sciences throughout the world," in the compilation of which Dr. Sajous is aided by seventy associate editors, who again are assisted by over two hundred corresponding editors, collaborators, and correspondents. The present issue is the fourth of the series, and sustains the reputation already gained by the others. We have drawn the attention of our readers in previous years to the excellence of this publication and the magnitude of its scope, and do not doubt that it is already in the libraries of many of them. No one who wishes to keep pace with the advance made by the medical sciences during the previous year can afford to neglect this storehouse of information, where everything is carefully arranged by skilled hands and made easy of access, whilst a glance through the series would probably save our societies many lengthy discussions on exploded theories. The delay in the appearance of this issue was caused by sickness amongst the editorial staff, and by the increase in their professional duties from the continued prevalence of influenza, one only of the three secretaries being able to continue at his post. The general plan and logical sequence of the work are like that of last year, but a great improvement is the addition of a reference list at the end of each volume. Those who are accustomed to refer to the work from time to time will appreciate this change. The illustrations are good and sufficient. We cannot refer to individual parts of the work in detail, but our readers will find it to their interest to do so, for whether they turn to the medical, surgical, anatomical, physiological, or other sections, they will have the latest and most important before them—the wheat of the world's gainings carefully winnowed.

The Cosmopolitan for October.

As the time approaches for the World's Fair, greater interest is beng felt in the marvellous City of the Lakes. The Cosmopolitan Magazine devotes 28 pages of the November number to a most interesting and exhaustive article upon Chicago from the pen of the famous novelest, Capt. Charles King. Count Jacassy, who spent some time on the ground for that purpose, and Harry Fenn, have illustrated the most charming features of the city by twenty-eight sketches. An article upon Alfalfa Farming, in this number, is by John Brisben Walker, who, as the result of ten years spent in the saddle, in

direct superintendence of his farm "Berkeley," one of the largest Alfalfa farms in Colorado, gives the reader much valuable information in regard to the irrigation and curing of the wonderful plant which is destined to become one of the most valuable products of the United States. General Sherman's letters to his daughter, written from the field during the war, are perhaps the most valuable contribution that has yet been made to the literature of the war. Judge Tourgee furnishes a charming story called "An Outing with the Queen of Hearts." Louise Chandler Moulton, Commander Crowningshield, ex-Postmaster General James, are among the other contributors. Gen. Horace Porter's article on Militia Service is worthy the attention of every one interested in the National Guard. Very curiously, but little attention has ever been given in the magazines to the frightful tragedies of the Roman Amphitheatre, which were carried on through centuries, and in which the lives of hundreds of thousands were sacrificed. C. Osbourne Ward, whose book "The Ancient Lowly" last year excited much attention, and who has made this subject his life work, gives an article in the November Cosmopolitan on the "Massacres of the Roman Amphitheatre," and the article is illustrated by drawings by Dan Beard, and from famous paintings, covering pages of history which will hold the reader's closest attention. (Cosmopolitan Publishing Co., Madison Square, New York. Price 25 cents.)

Contents of Scribner's Magazine for October.

"Bear in the Mountains." Frontispiece. Hunting American Big Game, page 450. Drawn by A. B. Frost; engraved by Andrew.

"The Corso of Rome." By W. W. Story. [The fourth article of the series on the Great Streets of the World.] Illustrations by Ettore Tito; engraving by Peckwell, Aikman, Miss Powell, Leblanc, and J. Clément.

"The Voices of Earth." By Archibald Lampman.

"The Wrecker"—Chapters VII.—IX. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August—to be continued.) With a full-page illustration by William Hole.

"Autumn Haze." By R. K. Munkittrick.

"Hunting American Big Game." By Archibald Rogers. Illustrations by A. B. Frost.

"C. H. R.—Lost off Hai-Mun in the China Sea." By Julia C. R. Dorr.

"The Actions of Wounded Animals." By J. N. Hall, M.D.

"In One's Age to One's Youth." By Edith M. Thomas.

"The New Lake in the Desert. By J. W. Powell, Director of the U. S. Geological Survey.

"The Biography of the Oyster." By Edward L. Wilson. Illustrations by Carlton T. Chapman, Charles Broughton, and J. H. Twachtman; engraving by Aikman, C. I. Butler, Merrill, and Beard.

"Clytie." By Ernst Schottky. With headband and initial by Kenyon Cox.

"A Prayer." By Anne Reeve Aldrich.

"Carlyle's Politics." By Edwin C. Martin.

"Captain Black." By Charles E. Carryl.

"The Point of View." Imagination and Livelihood—The Caviare Theatre—Laurence Oliphant's Life—Sancta Simplicitas.

Wood's Medical and Surgical Monographs. Vol. II, No. 3, Sept., 1891, Foods and Dietaries. A Manual of Clinical Dietetics. By R. W. Bunet, M.D. Stertor, Apoplexy and the Management of the Apoplectic State, by Robert L. Bowles, M.D. Wm. Wood & Co., Publishers, New York. Price, $1.00.

Dr. Burnet considers these practical and interesting subjects in chapters covering specific instructions as to diet in: Diseases of the Stomach, the Intestinal Tract, the Liver, Diabetes Melletus, Diseases of the Kidney, Scurvy, Anæmia, Scrofula, Gout, Obesity, Diseases of the Lungs and Plura, Diseases of the Heart, Acute and Chronic Rheumatism, Alcoholism, Nervous Disorders, Diathetic Diseases, Diseases of Children, Prepared and Predigested Foods, and Sick Room Cookery. This is a subject that all physicians should seek the latest information about. The proper solution of the dietetic question often marks the difference between success and failure in relieving or curing disease. Dr. Bowles presents an interesting *resumé* of the management of the Apoplectic state.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION, together with the Anatomy of the Viscera, prepared especially for students of medicine. By Charles B. Nancrede, M. D., Professor of Surgery and Clinical Surgery in the University of Michigan. Fourth edition, enlarged and revised, with an appendix containing Hints on Dissection by J. Chalmers DaCosta, M. D. Thirty handsome full-page lithographic plates in colors, and 188 woodcuts. W. B. Saunders, Philadelphia, Publisher. Pages, 388. Price, $2 00 in cloth or oil-cloth; sheep, $2.50.

The colored plates of this book have been most happily selected by Dr. Edward Martin and convey most accurately the anatomical structure and relations of the viscera to each other and to the body. They furnish alone an excellent *raison d'etat* for the book, and with Dr. Nancrede's concise and definite descriptive text, the work must be found of great service to students, and all practitioners interested in reviewing and completing their knowledge of body structure.

THE URINE—The Common Poisons and the Milk—Memoranda, Chemical and Microscopical, for Laboratory Use. By J. W. Holland, M. D., Professor of Chemistry and Toxicology, Jefferson Medical College. Illustrated; tenth edition, revised and enlarged. P. Blakiston & Co., Philadelphia. 1891. 94 pages, interleaved. Price $1.00.

This book is intended to be used as a syllabus for the laboratory. The text is made brief and to the point, so as to make a pocket volume handy for reference. Pages are left blank for calculations, memoranda, or more extended notes to be made by the student. For the convenience of those whose course of study is very short, the most important matter is printed in the larger type. Provision is made for more thorough study by the explanations and quantitative processes given in the small print.

In its November number the *Cosmopolitan* will publish a series of letters written by Gen. W. T. Sherman to one of his young daughters, between the years 1859 and 1865, and covering most of the important events of the war of secession. These letters present graphic pictures of a great soldier amid some of the stirring scenes in which he was a giant figure.

Notes and News

Modern Names of Medicinal Agents.—

The New York Medical Journal, in commenting on dermatol, gives voice to some trenchant criticisms of the methods in vogue of naming products by fancy names rather than their descriptive or proper ones.

"Dermatol" is the empirical term attached by the Hoechster Farbwerke, of Germany, to the subgallate of bismuth prepared by them as a substitute for iodoform. It is asserted to have a strong claim upon the specialists in skin diseases on account of its antibacterial, astringent, and drying properties; but let us suppose that those specialists do not adopt it, but that the gynæcologists, for example, find in it unexploited advantages, how meaningless becomes the term "dermatol"! And, further, to follow the line of criticism marked out in a recent issue of the Pharmaceutische Zeitung, if dermatol should prove to be all that its promoters allege, the results might be unfortunate. Other products might then be pushed into the market by the manufacturers, and we might be offered a *gynæcol* for the use of uterine specialists, and a *chirurgol* for surgeons, and nothing seemingly stands in the way of baptizing our old stand-by, the subnitrate of bismuth or some combination thereof, under some new name like *gastrol* or *stomachol*. Rival houses might then be seen competing for the good-will of our eye doctors, one with an *ophthalmogol* and another with an *opticol*. Even the Hoechster Farbwerke should be willing, after this, to acknowledge that the *reductio ad absurdum* had been brought home to them.

Experimental Malarial Infection in Man and Animals.—

Mattei (Riforma Medica, May 30th, 1891) sums up some experiments made on man and animals as follows:

1. In man, after intravenous injections of blood containing a well-determined variety of malarial parasite, not only is malarial infection reproduced, but the type of the disease corresponds exactly to that from which the injections were made.

2. In pigeons the parasites of the blood are never reproduced in whatever manner the

inoculations may be made. It is not possible to produce infection in man by the blood of a malarial pigeon, or *vice versa*.

The Pathology of the Jews.—

This subject was recently discussed before the Académie de Medicine by MM. Worms Lagneau, Bouchardet, and Germain Sée.

Opinions were expressed that the Jews were specially predisposed to neurasthenia, hysteria, tabes, gout, and diabetes.

Sée regarded the statistics advanced in favor of these views to be of doubtful value, and paid a glowing tribute to the Jewish race, dwelling upon their sobriety, frugality, the excellence of the Mosaic sanitary precepts, the absence of illegitimate offspring among them, and denied that they possessed morbid receptivity to any disease. He further stated that there was no distinctive pathology of the Jewish race, and that the subject was outside the pale of scientific discussion.

Researches on the Ætiology and Treatment of Cancer.—

Professor Adamkiewicz, of Cracow, who has been making researches on the ætiology and treatment of cancer which he thinks likely to lead to highly important practical results, recently applied to the Austrian Minister of Education for permission to pursue his investigations in a larger clinical field than he can command at Cracow. The Minister has placed the material in the First Surgical Clinic of the Vienna General Hospital at his disposal for the purpose during the next winter semester. Professor Adamkiewicz has already begun work in the Austrian capital.

The Anatomy of the Oyster.—

Edward L. Wilson, in Scribner's for October, writes entertainingly on this subject. He informs us that the oyster has a heart, liver, stomach and digestive organs, respiratory organs, and all as sensitive as in human beings. One would fain exclaim, in reading Mr. Wilson's article:

There's never a cate
That ever man ate
Can compare with our Yankee oyster;
He's prince of all food.
Whether dressed, or if nude,
We swallow him out of his cloister.

A New Method of Compressing the Subclavian Artery.—

Keen, in a further contribution to this subject in the College and Clinical Record, July, 1891, calls attention to the necessity of using a pad that dips well down behind the clavicle. He now employs one made of wood for this purpose, and quotes a case of Dr. Parkes in which his method was successfully used. The Esmarch bandage is applied in the form of a figure 8, one loop going through the opposite axilla and the other beneath the perineum, the point of crossing being on the pad pressing on the subclavian artery.

State Care of Epileptics.—

Dr. F. Peterson, of New York, Chairman of the Department of Health of the American Social Science Association, advocates the State care of epileptics—one asylum in each State. He estimates that there are more than 100,000 epileptics in the United States, and that there are at least 2,000 in the almshouses and asylums of the State of New York. He hopes New York will follow the example already set by Massachusetts, Ohio and California, in making separate provision for these unfortunates.

Excision of Part of Right Lobe of Liver.—

We learn that on October 9th Professor W. W. Keen, of Philadelphia, removed from a patient a considerable portion of the right lobe of the liver for the excision of a cystic tumor, the entire mass taken away being about two-thirds the size of a man's fist. The woman's temperature has remained normal, or nearly so, since the operation, rising only once to 100° F. There seems every reason to believe that the patient will recover.—*Medical News.*

The Ship Surgeon's Lot Not a Happy One.—

The Massachusetts Supreme Court has recently expressed an opinion that the ship's surgeon, and not the company that employs him, is responsible for damages when action is brought by passengers for maltreatment *en voyage*. While this may be regarded as an unjust decision, if it should lead the companies owning passenger steamers to employ more efficient surgeons there would be less chance of suits for malpractice.

The M.D. of the Future.—

The New York Medical Record is responsible for the following effusion:

I'm going into partnership
With a lovely young M.D.;
She brought me safely through the "*grip*,"
And now she'll marry me.
She'll keep her practice as before,
She's wise in everything;
And as for me—I'll tend the door
And do the marketing!

A New Hospital.—

The Duchess Eugenia Litta Bolognini has given 500,000 francs ($100,000), the proceeds of the sale of her jewels in consequence of ths death of her husband and son, to the Ospedale Maggine, Milan, with a special request that the money may be applied for the benefit of the Surgical Department for Children.

A New Charity—A Banquet for Babies.—

There was recently held in New York City a banquet given by the World's Corps of Physicians for the relief of sick children. The toast which roused the most enthusiasm was: "The Babies—God Bless Them." This is a humanitarian age. The example set by this Association of physicians is worthy of wide imitation.

A New Departure in Medical Teaching.—

The College of Physicians and Surgeons of Chicago has taken a new departure, in organizing a fourth year of medical study, to be pursued in the preceptor's office.

An Opium-Smuggling Ring.—

Rumors from Washington indicate that an immense opium-smuggling ring has been unearthed, and that not a few officials of high degree are in it.

The Medical Department of the University of Texas starts out with a full line of new professors, whose official salaries range from $2,500 to $3,000.

Therapeutic Brevities.

Rules for the Administration of Cocaine.—Dr. Magitot, in the Repertoire de Pharmacie for August 10th, 1891, formulates the following rules which should govern the employment of cocaine as an anæsthetic:

The dose of cocaine injected should be appropriate to the extent of the surface desired to render insensitive. It should not exceed in any case one grain to one grain and three-quarters. Each dose should be restricted in large surfaces.

Cocaine should never be employed in cases of heart disease, in chronic affections of the respiratory apparatus, or in nervous subjects; and this exclusion applies also to the other anæsthetics.

Cocaine should be injected into the interior and not under the derm of the mucous membrane of the skin. This is the intradermatic method of Reclus, which should be submitted for the hypodermatic method. By this means the introduction of a substance into the vein is avoided and the risk of accidents therefore minimized.

The injections should always be practiced upon the subject in a recumbent position, and he should only be raised when the operation is to be performed upon the head and mouth, and then only after anæsthesia is complete.

The cocaine should be absolutely pure, since, as pointed out by Labordé, its mixture with other alkalies forms highly poisonous compounds.

Cocaine should be injected in divided doses, with a few minutes' interval.

Suspension of administration, or, as the author terms the method, "fractional injection," renders it possible to guard against the production of sudden symptoms of poisoning.

Analgesin in Affections of the Pharynx and Larynx.—M. E. Saint-Hilaire (Archives de Laryngologie, September, 1891) refers to a recent paper by himself and M. Coupard, in which they described the therapeutic value of analgesin, applied locally, in certain throat affections. By its means they were able to cure a variety of complaints dependent on undue sensibility of the pharynx and larynx, such as spasmodic cough, sensations of pricking in the throat, or of a foreign body, etc. These results seemed due to a local anæsthetic effect of analgesin, and M. Saint-Hilaire has performed numerous experiments with the view of determining the anæsthetic properties of analgesin. He draws the fol-

owing conclusions from these experiments: 1. The anæsthesia produced by analgesin is complete, and applies to tactile sensation and to sensations of heat and cold. 2. The anæsthesia lasts from one to two hours. 3. In order to produce this effect the strength should be not less than 30 per cent. The solution employed by M. Saint-Hilaire is of a strength of 40 per cent. He thinks that analgesin will be found especially useful in cases where a prolonged analgesia is desired; thus, in tuberculous ulceration, the pain may be kept under by painting the parts with the analgesin solution two or three times a day. It will be found useful in those affections where either the reflex element or the painful element predominates. Moreover, analgesin possesses an antiseptic property which will render it additionally useful in certain cases.

Sub-membranous Local Treatment of Diphtheria.—At the last meeting of the American Medical Association, Dr. A. Seibert, of New York, reported thirty-five cases of pharyngeal diphtheria treated by sub-membranous injections, with a demonstration of the methods employed. He pointed out that the various antiseptics applied to the throat do not reach and destroy the bacilli underlying the false membrane. In order to effect this object, he injects, by means of hypodermatic needle-points, an antiseptic into the inflamed mucous membrane under the affected part. He uses a hypodermatic syringe, to which can be attached a long tube terminating in a flat, hollow extremity, from which projects a number of short hypodermatic needles. A variety of shapes enable these needle points to be pressed into any part of the affected pharyngeal mucous membrane. After placing the syringe in position he presses the needles into the submucous tissue, and then injects about twenty millimetres of chlorine water. This liquid he finds to be the most suitable, the safest, and the strongest antiseptic, for this purpose. Of the cases reported he had only lost two, and these from complications. The general treatment is at the same time carried out with careful attention to detail.—*Boston Med. and Surg. Journal.*

Antiseptic India Rubber Cushions.—Patients frequently complain of the inconvenience of using the various forms of bed-pans at present in existence, arising from the want of proper padding for the utensils when in use. The London Lancet describes India-rubber air or water-cushions, which can be applied to the bed-pan, bed-slipper, or bed-bath, thereby ensuring comfort for the patients suffering from many of the most distressing forms of disease. In the case of the bed-slipper, the upper surface is covered with a cushion attached to a case, into which the slipper is placed, the cushion being firmly secured by straps. The India-rubber cushion can then be inflated with air or supplied with warm water, or partly with the one, partly with the other, making in this way a warm, light, soft cushion, most comforting to a bed-ridden patient. For the bed-bath the cushion covers the whole of its upper surface, and being filled in the way described in the previous case, is thus admirably adapted for urethra, vagina, perineum, and rectum cases. The cushions are strong durable, convenient of application, and, being entirely of India-rubber, can be thoroughly carbolized and rendered perfectly aseptic.

Normal Liquid Digitalis in Abdominal Dropsy.—Dr. Oren O'Neal, in Medical Summary, reports his success in treating dropsy with Normal Liquid Digitalis. He says:

The happiest cure I ever obtained was in the case of a colored woman who had been tapped twenty-one times. She was ready for another operation, as "big as a barrel," when she called on me. I prescribed the following:

℞ Normal liq. digitalis (P., D. & Co.), ♏ lxiv.
Aquæ, ʒ viij.

M. Sig. Teaspoonful three times a day.

Simply this and nothing more. One bottle effected a cure without any more tapping, and the cure is permanent. This was five years ago, and she is alive and well, the ascites never having returned. In another case almost as bad, I obtained as good results, though not so quickly. I have used the same remedy in many similar cases with happy effect: One-drop doses of the normal liquid three or four times a day is the limit. I have tried larger doses, but the effect was not so marked.

Results in Treatment of Fractured Femur.—Stephen Smith, M. D., reports a satisfactory result in the treatment of fracture of the shaft of the femur where firm bony union exists:

The long axis of the lower fragment is either directly continuous with that of the upper fragment, or the axes are on nearly parallel lines, thus preventing angular deformity.

The anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position.

The length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs, viz., from one-eighth of an inch to one inch.

Lameness, if present, is not due to more than one inch of shortening.

The conditions attending the treatment prevent other results than those obtained.

Rhus Aromatica in Enuresis.—A writer in Archives of Pediatrics reports sixteen cases in which he found this remedy serviceable. He says that in all cases he excludes phymosis or an adherent prepuce as the cause. It is well to commence with minute doses, gradually increasing a drop or two each day so as to prevent any gastric disturbance. The following is a very palatable formula for young children:

℞ Extr. rhois aromat, fl., f ʒ iij.
Elix. aromat., f ʒ jss.
Aq. cinnamom., q.s. ad, f ʒ iij.

M. Sig.—Half-teaspoonful, to be increased to one teaspoonful, four times a day after eating.

Much stress should be laid upon diet and general regimen. The quantity of drink should be restricted. Very little meat should be allowed, owing to the effect it has of acidifying the urine. The child should have plenty of fresh air and exercise; and should be given every morning a cool, or even cold, sponge-bath, with a tablespoonful of sea salt added. The body should then be briskly rubbed with a moderately coarse bath-towel, especially in the region of the spine.

Agaricinic Acid in the Night Sweats of Phthisis.—Combemale, and Patoir (Bulletin Médical du Nord, May 22d, 1891) have investigated the action of agaricinic acid as an anti-sudorific drug. They find that its only physiological action is to prevent sweating, no matter what the diseased condition causing it, but that it is especially valuable in tubercular patients in the second stage of the disease. Two doses of two to four centigrammes are sufficient for this indication. The drug should be exhibited in a pill mass containing two centigrammes, and one or two of these pills can be given every day without causing any disagreeable symptoms if there already exist no digestive troubles. The diminution or suppression of sweating is manifested two hours after administration and lasts about six hours. The authors prefer this drug to atropine and camphoric acid believing it equal to tellurate of soda.

Hydrastis Canadensis for Night Sweats.—Apropos of the treatment of night sweats Kruse (Berliner Klinische Wochenschrift, No. 22, 1891) reports that while using hydrastis canadensis for the hæmoptysis of phthisis, in which he has found it very efficient, he has been surprised to find a most positive effect upon the night sweats, which, during the occasional administration of the drug, have been completely suspended. In one case where the usual remedies, such as atropine, agaricin, sulphonal and secale cornutum, at first efficient, subsequently lost much of their effect, the intercurrent use of hydrastis for slight hæmorrhage completely checked the tendency to sweating. Thirty drops of the fluid extract given at evening were entirely successful, and the result was maintained for three weeks after cessation of a short course of this treatment.

Cocaine Ointment in Vaginismus.—Dr. Baas reports (L'Union Med., No. 8, 1891) the following case in which the use of a cocaine ointment was of service in vaginismus. A young women, twenty-four years of age, suffered from terrific pains in the vagina during coitus. A simple vaginal examination was sufficient to produce an attack, and gave one the sensation of a very tense and hard ring constricting the finger. In the middle of this ring was a deeper and more painful spot. The application of a cocaine ointment ten parts to a hundred, caused the painfulness to disappear in the course of ten days. The reporter admitted the great sexual excitability of this patient, and warmly recommended in such cases the employment of a cocaine salve.

Raising Children in Bran.—This method was proposed by M. Pue at the Société Normande d' Hygiene Pratique. It consists of a cradle which has the wooden bottom taken out, and is then lined with a strong cloth. In this is placed sterilized bran to nearly half a yard in depth. A hair pillow is used. The baby has only a short flannel shirt on and is

aked from the navel downward. It is overed with a woolen blanket, and a wool- ned dress is kept to put it in when taken p for nursing. It has thus full liberty of ıovement in all its limbs, while its dejec- ons pass at once into the pure bran, keep- ıg the child dry and clean, even if there is iarrhœa. This method is a cheap one, the ran not costing as much as diapers.—*Boston led. and Surg. Jour.*

Local Use of Menthol in Affections of ıe Middle Ear. — Dr. Adolph Brounel ives some interesting facts concerning the se of this remedy in certain diseases f the ear. "The most favorable cases eem to be those of chronic swelling of ıe mucosa. When the mucosa is greatly vollen, he directs the use of a snuff of boric cid with two per cent. of menthol to be fre- uently used in small quantities, at the same nflates the middle ear with the catheter and enthol vapor. A few drops of a twenty er cent. solution of menthol in olive oil is oured into an antiseptic capsule, and this is ıen firmly attached to the catheter."—*rchives of Otology.*

Music and Therapeutics.—It has lately been ıggested that music might prove a useful djunct (in some cases at least) where the sual routine treatment had not been satis- ctory. We venture to suggest the follow- g airs as being suitable for the cases umerated, viz.: Retarded labor from in- tia, "Comin' Thro' the Rye:" Cases of ıronic deafness, "Come Back to Erin:" pilepsy, "Let Me Like a Soldier Fall:" Py- xia, "The Coolin:" Melancholia, "The eart Bowed Down:" Cases of doubtful agnosis, "Oh, Dear! What Can the Mat- r Be?"—*Medical Press.*

Silver Chloride in Whooping-Congh. — œffler advises the use of freshly prepared ıloride of silver in the prevention and treat- ent of whooping-cough. As given in the oston Medical and Surgical Journal, his eferred combination is the following: hloride of silver (freshly prepared), 1½ rains; water, 2 pints; hyposulphite of so- um, a saturated solution. Mix. Use by ı atomizer, the spray being directed into ıe pharynx. Repeat the application every vo or three hours.

Medical Progress.

Deep Urethral Medication in the Treatment of Urethral Catarrh.— Some practical suggestions for deep urethral medication in the treatment of posterior urethral catarrh are made by Keyes (Medical Record, vol. xv., No. 4), whose position as a genito-urinary surgeon is such as to entitle any of his writings to careful consideration.

He again calls attention to the fact that it is impossible to say exactly what a stricture is, since every natural undulation of the canal may be so classed by the physician who is properly impregnated with the large-calibre-urethra idea, and hence he is sure to find what he looks for in every case of gleet.

Keyes states that the vast majority of chronic gleet cases have already been cut anteriorly in the urethra from one to eleven times, and that very few of them have been tested to ascertain whether they have posterior urethritis or not. He states that one may easily learn how to cure many, and diagnosticate all, cases. Where the trouble is due to anterior urethral catarrh, caused by stricture, granulations, or what not, the source of the pus may be demonstrated without the endoscope by gentle, thorough, hot irrigations of the anterior urethra by means of a soft catheter passed into the sinus of the bulb, and the immediate subsequent use of the simple metallic bulbous bougie, provided the meatus be reasonably large; for if the pus comes from granular or strictured portions of the pendulous urethra, the irrigation will only wash away what lies loose in the canal, and the bulb will subsequently bring forth upon its shoulder soft muco-purulent clots, generally tinged with blood, which have been scraped off the excoriated areas from around which the inflamed mucous membrane secretes whatever free pus exists. There may be tight areas, which the bulb will detect; but if there be not a granulating surface upon the tight area or behind it, which the bloody muco-purulent clots on the shoulder of the bulb will demonstrate, or their absence disprove, then the cutting of such tight areas will not favorably modify gleet in most instances. Even though there may be some tight areas and a moderate condition of granulation, if there is also posterior urethritis, the cutting of the tight areas, although it may greatly moderate, will not cure the gleet, and this should be told a patient before such operation is undertaken.

When there is posterior urethritis, the quan-

tity of pus lying in the urethra behind the bulbo-membranous junction is disproportionately great when compared with the amonnt of gleety discharge that appears at the meatus. This may be readily demonstrated. If the urethra be milked by firm pressure with the finger, from the perineum forward, until all the pus that will come be squeezed out, and then the patient be instructed to urinate in two parts, into separate glasses, if he have even moderate posterior urethritis the quantity of pus mixed with the first urinary gush, representing the washing out of the deep urethra, will be disproportionately great when compared with what has flowed out spontaneously from the meatus or been milked out by the physician before the urinary act, as shown by gross inspection of the specimen. And if the grade of posterior urethritis be intense, not only will the first urinary gush be purulent, but also the entire secondary flow will be turbid with pus. In case of doubt, the anterior urethra may be irrigated before the urinary test is applied. The pus may, of course, come from the prostate gland or the seminal vesicles; but this may be demonstrated by milking of these organs by means of a finger in the rectum, between the first and second urinary flows, urine being retained in the bladder to be ejected in the third urinary discharge, and the specimens to be examined microscopically after settling.

The clinical picture of posterior urethritis is fairly typical. After the subsidence of an acute attack of gonorrhœa, which has, perhaps, been complicated by cystitis or vesical irritability, there follows a mild gleet. So long as the patient uses an injection, his urethra remains dry and he thinks himself cured. On leaving off this treatment, however, the discharge reappears, sometimes accompanied by discomforting sensations in the anterior urethra near the meatus, or referred to the perineum, and sometimes accompanied by urinary urgency and precipitancy. Wines, spirits, or indulgence in sexual intercourse promptly aggravate the gleet. Most of these cases have the anterior urethra cut for a close stricture of large calibre, and are subsequently treated by large sounds, often with much benefit; frequently, however, the passage of these instruments aggravates the discharge and lights up either cystitis, prostatitis, or epidymitis. Most of these cases ultimately get well, and without local treatment.

Rest, balsams, alkalies, demulcent drinks, counter-irritations, change of air, treating of the anterior urethra, iron in chronic cases, all of these are potential, and most of these can be happily combined with local posteri treatment. Some few cases are positive unsuited to local treatment and get wor under it. Most tubular cases, and some sin ple inflammatory and some ordinary gono rhœal cases, can be classed in this grou When the treatment disagrees, sympton become so promptly and obviously aggr vated that the futility of repeating applic tions is at once clear. There is no danger producing cystitis or epididymitis if instr ments are used carefully and not inserte too far; the risk incurred of occasionin these symptoms is vastly less than in trea ing the disease with anterior injections sounds and internal medication. The instr ment employed is founded upon Ultzmann model, differing from the latter in bein made in one piece. The syringe has onl one minute opening at the tip. The latt may be inserted just within the hole in th triangular ligament, that is, a trifle beyon the bulbo-membranous junction. The mem branous urethra grasps the tip of the instr ment, and the contents of the syringe, twent minims, or more, may be gently thrown i the entire injection will flow backward alon the membranous urethra, through the pro tate, and into the bladder, with as litt violence as possible, not one drop escaping the meatus upon the withdrawal of the sy inge. Instead of using a few drops of strong solution, it is better to use a large quantity of a mild solution. The entire cor tents of the syringe should be used in ever instance, excepting when nitrate of silver i employed in a strength greater than te grains to the ounce. The strength of given substance is increased gradually afte establishing tolerance to milder strength When the source of the pus is reasonabl well foward in the urethra, the injection ma be made before the patient urinates; whe the inflammation extends further backwar and the supply of pus is considerable, th patient should urinate just before makin the injection, so that the fluid will flow int the bladder and become thoroughly applie to the mucous membrane at the interna prostatic urethral orifice, without being dilu ted or neutralized by coming in contact wit urine in the bladder at this point.

In suitable cases the free pus disappear from the second urinary flow, then it disap pears entirely from the urine, some shred still remaining. These are attacked by in creasing the strength of the injected fluid, o if there be some stricture in the membranou urethra, by the use of sounds, after the catar rhal surface has been modified by the previ ous employment of injections, combine

ten with anterior astringent injections hich the patient himself administers.

After an extensive use of various remedies hich have the repute of controlling the flow pus from mucous membranes, Keyes relies most exclusively upon four substances—lphate of thallin, sulphate of copper, glyce-l of tannin, and nitrate of silver.

The sulphate of thallin is bland and prac-cally unirritating, and may be used up to a turated solution, which is about twenty-ur per cent. It is suitable in all the acuter rms of inflammation (except cases of acute ank, recent gonorrhœal cystitis, in which e nitrate of silver has the preference), and the substance which should first be used a watery solution of about three per cent., creasing at each injection up to six, nine, d even twelve per cent. The last-named lution will usually accomplish all that this ug can do in reducing the free secretion of s. The intervals between injections should e two, three, or four days, according to the fect. The treatment causes practically no scomfort, and the injection may be retained s long as the patient chooses.

The sulphate of copper is used in the rength of one per cent. in pure glycerin. his solution is given in water, commencing ith about one grain to the ounce and work-g up rapidly to full strength. This drug is arkedly astringent in suitable cases.

Where a more astringent effect is aimed than that produced by copper, the glycerol-nnin may be employed. As this substance too thick to be sucked readily into a syr-ge it is thinned by the addition of water.

Nitrate of silver is exceedingly valuable in onorrhœal cystitis, and is most useful when nnin prove inefficient. The first injection ould be of the strength of about one grain the ounce. The applications are made om three to eight days apart, and are in-eased in strength to ten grains to the unce. This is the harshest of the applica-ons, but carefully used is free from danger f producing complication, and is very effi-ent. Thallin and nitrate of silver should ot be used in the same syringe, as a black lution is made which is difficult to wash ut.—*Amer. Jour. of Med. Sciences*, Oct., '91.

Cocaine in Alcohol and Opium Habit.—F. A. Overall, M. D., in Med. Summary ecords his experience with cocaine in alco-ol and opium habit as follows:

While cocaine has no equal as a local an-sthetic, and for that purpose alone is of ncalculable worth, and is also one of our romptest and most reliable nerve and brain tonics, it fills a special place, and one, perhaps, that stands foremost of them all. That is, its relief and cure to the unfortunate alcohol and opium *habitue*. Within the last three months I have made note of the following cases:

Mr. S. had the morphine habit for two years, given rise to by the use of the drug for rheumatism. At the time I put him on cocaine he was taking two grains of sulph. morphia, hypodermatically, every four hours. After getting his promise not to take any morphine while under my care, I gave him, subcutaneously, cocaine mur. 1 grain. This was about the hour for his puncture of morphia, so the cocaine was given in its stead. In less than five seconds the patient expressed a feeling of delight with the effects of the new agent, claiming that he felt better than for months, that he felt more vigor of mind and body. This quantity was repeated as was his habit with the morphia for three weeks; then gr. ¾ was given for two weeks, and then gr. ½ for one month, when the case was dismissed cured. The patient at no time suffered more pain than he could bear for the want of the morphia.

For fear I will cover more space than would be acceptable, I will simply state that I gave three other opium takers and one alcohol inebriate cocaine on the same principles, that is, the same quantity of cocaine at intervals in proportion to the quantity of morphine, opium, or alcohol used, as in the preceding case. The alcohol patient is dismissed, and he claims to have no desire whatever for the stimulant. He had been using it for a number of years, and was cured in forty days.

The other cases are yet under the use of the cocaine, but in small quantities. I think in a short time they will all be free from the clutches of the demon morphia, *and I hope I have not transferred them from one evil to another*. In each case the demand for the morphia or opium was at once destroyed, and all the bad effects following their use quickly gave way—such as constipation, loss of sexual power, mind, etc.

If what I have done with cocaine in the class of cases here reported is permanent (and I believe it will be), there is a future for cocaine equal, if not superior to the discovery of the immortal Jenner. My experience with cocaine is, that instead of producing constipation, checking the excretion of urine, and destroying the sexual appetite, it overcomes the first where existing, and increases the flow of urine and sexual power. The latter I have tried on myself, and know it stands far above testicular secretion.

FEMORAL AND VENTRAL HERNIA IN WOMEN.—In a paper thus entitled, read at the recent meeting of the American Association of Obstetricians and Gynæcologists, Dr. Henry O. Marcy, of Boston, described the methods by which he obtains a radical cure. He advocates the dissection of the sac to its very base, which is sutured across and removed. The internal ring is carefully closed by a line of deep, double, continuous tendon sutures. The canal is narrowed and closed in a similar manner, and the wound sealed with iodoform collodion without drainage. The operation is conducted with the strictest antiseptic care. There is but one rule, he says, and it cannot be too rigidly enforced: The *aseptic* suture must be *aseptically* applied in *aseptic* structures, and the wound must be maintained *aseptic*. The failure of either of the above-mentioned factors not only endangers the result, but may be followed by the most serious consequences. Modern surgery demands of the operator every safeguard to insure an aseptic wound, but he who uses buried animal sutures must take, if possible, even greater precautions, since infection carried into a wound thus firmly closed is, for obvious reasons, attended with much greater danger than a wound united by interrupted sutures which, at the end of a few days, are to be removed, and where drainage is relied upon to permit of the escape of infective or foreign material. It is in part on account of defective technique, the use of drainage, and the too often septic wound, that failure to effect a cure after hernial operations so generally occurs.

"I began," says Dr. Marcy, "to use the buried animal suture in operating for the cure of hernia in 1871, and since that time have for the most part used it in the closure of all operative wounds; and in all my operations for the cure of femoral hernia, where the integrity of the intestine has not been involved, I have never observed a subsequent symptom indicating danger, and, so far as I have been able to learn, there has not been a single recurrence. There is little pain, and even œdema of the tissues does not ensue. After a few days in bed the patient is allowed to sit up. In some instances I have permitted the use of the chair on the second day without any apparent harm. I never advise the subsequent application of a truss.

"If it can be demonstrated that femoral hernia is curable, then the advisability of the operation should be taken into consideration, and if it can be proved that the cure remains permanent, it adds much to the argument in favor of operative measures; but where it is demonstrated that under proper precautions, based upon an accurate anatomical knowledge of the structures involved, the operation is not severe, does not cause long detention from active duties, does away with the punishment inflicted by the life-long wearing of a truss, and is almost without danger, there remains no reason why all the sufferers from femoral hernia should not profit by surgical measures and demand to be restored to the ranks of active service."

Dr. Marcy makes an equally strong plea in behalf of surgical intervention for the cure of sufferers from umbilical and ventral hernia. In umbilical hernia he dissects the peritoneal sac quite within the margin of the ring, sutures it across at its base, and resects it. The subsequent steps of the operation are conducted under irrigation. There are conditions when it is wise to resect the ring and close as in an ordinary laparotomy, but the method which the author more generally recommends is peculiar to himself. The structures composing the ring are divided laterally upon the plane of the abdominal wall, about half an inch in all directions. This admits of the coaptation of the sundered parts, and by lines of strong continuous tendon sutures the separated edges are coapted in a way greatly to broaden the united parts. This widens the line of union to an inch or more, instead of bringing together the narrow edges of the tendinous ring, and, besides affording this great depth to the united portions, brings together fresh-oned surfaces in a high state of vitality, likely to be followed by firm union. It also admits of the joining of the tissues in three distinct layers of strong sutures. As in the other forms of hernia, the skin itself is closed by a line of running or lacing sutures, taken from side to side through the deeper portions of the skin only, which admits of its coaptation by sutures entirely hidden from view. Such a wound requires no drainage, and is permanently sealed with collodion.—*N. Y. Med. Jour.*, Oct. 10th, 1891.

SYRUP TRIFOLIUM COMPOUND A VEHICLE FOR LARGE DOSES OF IODIDE OF POTASH.—In May, 1889, I was asked by Dr. Curry, to see Mrs. —. Her eyes had become affected within a few days so that the sight, especially in the left, had become seriously impaired. She had iritis in both eyes, coming on simultaneously. On more careful examination I found that it had not followed the course of an ordinary iritis; the subjective symptoms were by no means marked, especially when compared with the impairment of sight. The disease was of a plastic nature and adhesions

lready existed. I learned that she had been nder constitutional treatment for some time or symptoms arising from a specific disase through no fault of her own. She was uffering from a cutaneous disease of rupial orm, involving in some places the cellulur issue, leading to icterus after the crust was emoved, which was exceedingly obstinate o treatment. The cicatrices in some places roke down again and formed fresh ulcers. General health poor, and altogether it was n unpromising case.

Atropine solution, 6 grs. to ʒ i, was directed o be dropped into the eye, the same internal reatment to be continued; she was also given tonic and ordered porter. When I visited ier two days afterwards, I found the cornea n both eyes opaque from interstitial keratiis, and it appeared as if the whole eye-ball vas involved. Hot fomentations were ordered to be used, and these were alternated vith poultices of linseed meal. Notwithtanding the persistent use of various mercurials, neither the eyes or the ulcers showed nuch improvement. Deposits of coal black oigment occurred beneath the conjunctiva at he sclero-corneal border. Her appetite after time improved and she gained strength. As she lived out of the city I was not able to see her very often, but the treatment was continued.

After some time the corneal opacity began o disappear slowly: The ulcers also improved and gradually cicatrized, but were followed with a fresh outbreak in other places. Some of the most troublesome and largest which had cicatrized again ulcerated, especially those about the ankles and wrists and forearms. She was now given iodide potash in saturated solution beginning with 5 grs. three times a day, to increase 1 gr. each day. It was found impossible to increase the dose beyond 13 or 14 grs., though tried frequently by going back to the initial dose. At this time I met with a small sheet published by Parke, Davis & Co., setting forth the composition of Syrup Trifolium Compound. I thought it was worth while to try this as an alterative, and at the same time as a vehicle for the iodide of potash, and instructed her to increase the dose of the latter 1 gr. each day, and if possible to go on beyond what she had been taking. She went on until she took 80 grs. three times a day, which she kept up for three months without any difficulty. She improved in every way satisfactorily, gained in weight, and general appearance indicated good health. The ulcers all healed and the eyes improved, but they had been permanently injured by the obstinacy and extent of the disease. Still, after all inflammation had disappeared they continued to improve under the use of iodide.—Stephen Dodge in *Maritime Med. News*, Sept. 4th, 1891.

The Most Favorable Time for Fecundation.—The Archives of Gynæcology publishes the following views on this subject: Prof. Bossi, of Genoa (Gazzetta degli Ospitali, April 8th, 1891; Ib.), publishes the result of a long series of observations made with a view to settle these disputed qnestions. He closely watched several classes of women, such as newly married persons and wives of sailors who lived for more or less definite intervals apart from their husbands. Lastly, he noted the effects of what is termed artificial impregnation. This process consisted in transferring spermatic fluid, shortly after coitus, into the uterine cavity or simply into the posterior vaginal fornix from a less favorable position in the genital tract. He undoubtedly met with marked success, and his researches have led him to the following conclusions: (1) Fecundation, whether natural or "artificial," takes place within the first few days after a menstrual period. This implies that the encounter of spermatozoa with ova occurs neither before nor during the period of menstrual flow, but after the end of menstruation. (2) To avoid failure, the aid of art should be invoked on the very day on which the "show" ceases or during the three following days. (3) Spermatoza lodged in the posterior fornix, or *nidus seminis*, may remain alive there for even so long as seventeen days—certainly between periods, and in some cases during a period. (4) Hence it is probable that in cases of fecundation before a menstrual flow the spermatozoa have remained living in the fornix till after the period, and have not ascended the uterine cavity and the Fallopian tubes (*sic*) until the proper time has arrived for meeting the ovum. (5) The fact that spermatozoa may live so long in the posterior fornix—even through a menstrual period—is of importance from a medico-legal standpoint. The extreme limit of 300 days laid down by the Code Napoléon in questions of legitimacy, where a husband has been dead or absent for many months, would appear to be insufficient.

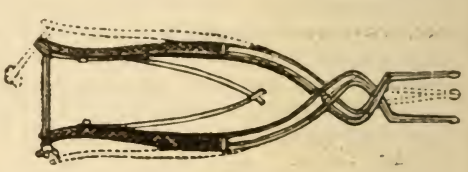
Blood-letting in Uræmic Convulsions.—Dr. Samuel Wilks, veteran physician at Guy's Hospital, is reminiscent, in a recent Lancet, of the good old days of blood-letting. He remembers seeing too many interesting

persons snatched by this agency from the brink of the grave to be unmindful of its claims, and he attempts to find excuses for the present day and generation in its neglect of phlebotomy. Of his success with the lancet he writes the following:

"A young woman was brought into the hospital in a dying state, gasping for breath, and livid; there was a mitral bruit, engorgement of the lung with hæmoptysis, albuminous scanty urine, and dropsy. We bled her from the arm and the effect was immediate; the breathing became tranquil, lividity passed from the face, and improvement continued from that time. In cases of *uræmic convulsions*, the effects of bleeding are very striking; the right heart is relieved, and poisoned blood is removed from the system. One case of this kind, indelibly fixed in my memory, is that of a dressmaker, who, I believe, is still alive. I was asked a few years ago to see this patient, who had been in convulsions all night. I found a middle-aged woman in constant convulsive movements, froth issuing from her mouth, quite comatose, and almost pulseless. The whole body was livid and the extremities cold. The doctor said she was dying, and allowed me therefore to bleed her. I took away a small wash-hand basin of blood, and, while yet flowing, the lividity passed off, the convulsions ceased, the body gradually became warmer. Her life was as clearly saved by the bleeding *as if I had dragged her drowning out of the water*, and this is more than I can say of drugs." With this, are other instances of the same tenor.—*Journal of the American Medical Association.*

External Use of Iodoform.—Dr. Edward Martin, University Medical Magazine, reports several cases of irritation from external use of iodoform, and adds: When the surgeon employs iodoform it is usually as a first application, over which is placed a bichloride dressing, the occasional irritant effects of which are so well known that in case a dermatitis is excited this is at once ascribed to the action of the mercuric salt. In the cases we observed the dermatitis excited by iodoform was exactly like that incident to a severe attack of rhus toxicodendron poisoning. Whether the development of this violent attack was dependent upon idiosyncrasy or upon a peculiar condition of the discharge from the ulcerating surface, cannot be said. In one instance the urine was examined and was found healthy. In two instances the iodoform twice produced the same effect, though one of these patient upon being again tried, exhibited no undu reaction of the drug. The cases we hav observed have at least taught us to plac some belief in the statement of patients wh say that iodoform does not agree with thei ulcers, and when severe inflammation follow the application of an iodoform-bichlorid dressing to regard with suspicion the dustin powder as well as the mercury.

A New Phymosis Dilator.—Often wher a phymosis is not very tight, or when parent object to circumcision, it is desirable t dilate the preputial orifice; and the dilator at present in use are either too cumbersom or stretch the posterior part of the prepuc in greater proportion than the orifice, be cause they start with parallel blades and dilate with a scissors-like action, in which case the orifice is scarcely, if at all, affected. The accompanying sketch shows a new dila-



tor designed by me, in which these defects are overcome. The blades start at an acute angle, and when parallel and inserted into the preputial orifice, the whole is stretched uniformly from orifice to back of the glans. The instrument has also a screw adjustment, by which the pressure may be exerted more gradually and evenly than by the hand alone. It is light and portable—desirable attributes when dealing with children.—T. F. Gardner, in London *Lancet.*

White of Egg in the Treatment of Sore Nipples.—F. Van Allen, M.D., writes to the New York Medical Journal of three cases in which he found white of egg painted on sore nipples several times a day entirely healed them in a few hours.

The albumen may best be applied just after nursing, while the nipple is still moist from the baby's mouth. As somewhat of a thick film is formed, it is well for the nipple to be moistened with a soft cloth dipped in water just before the baby is again put to the breast. The efficiency of the albumen is heightened by allowing it to dry on thoroughly before drawing the clothes again over the breast.

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Original Articles.

ULCEROUS ENDOCARDITIS TAKING ITS ORIGIN IN A SUPPURATION OF THE GENITAL ORGANS—OTHER CAUSES OF SEPTIC ENDOCARDITIS.

BY DR. E. LANCEREAUX.

You have had occasion to observe frequently in our wards two men who have succumbed one after the other to septicæmic infection. In both patients the autopsy has revealed the existence of an ulcerous or septic endocarditis, and in both we have noted a primary suppuration of the genital tract.

It is important that you should know the relation which seems to exist between these two orders of lesions, for this will enable you to comprehend the pathogeny of ulcerous endocarditis. I will first review the symptoms which characterized these patients, with the results of the autopsy and the microbiological examination.

Our first patient, J. L., a policeman, was 39 years of age, vigorous, and of good previous health. On December 12th, he was taken with fever and vomiting. Was admitted to the surgical department of this hospital on account of a furuncle on his right hand. He was transferred to the medical department on the 20th of December, and was assigned to No. 14, Ward Piorry. At the time of his admission, we noted a flushed face, dry and cracked lips, and fevered skin; temperature 39.8° C. He complained of violent headache, but the vomiting had ceased.

On examination, we found a multiform eruption of unusual aspect. On the ulnar border of the right hand, a superficial black crust surrounded by a red inflammatory zone, the whole about the size of a two franc piece. In the palm of the hand and on the pulp of the fingers, a pustular eruption resembling small-pox. On the external aspect of the arm, three fluctuating swellings, the size of a large pea, over the track of the lymphatic trunks. These swellings were not subcutaneous, they resembled little dermic abscesses in the process of formation. The corresponding epitrochlean gland was painful and tumefied. On the left upper extremity there was the same pustular eruption as on the fingers; a nodule on the external aspect of the arm; painful engorgement of the epitrochlean gland. On the face, a few small pustules. On the trunk a number of scattered pustules, and three large bullæ filled with lactescent serosity. On the point of the tongue, traces of two bullæ which had recently burst. Nothing in the throat.

The appetite was *nil*, the tongue saburral; there was no diarrhœa, and the abdomen was supple, with no meteorism and without gurgling. Clinical examination of the viscera revealed no appreciable lesion. Respiration was hurried, but regular. There were no râles or other morbid sounds. The heart sounds were clear, rhythmical, without souffles. The liver was not painful; did not extend below the false ribs, and percussion over the spleen indicated only a slight augmentation of the normal dullness. The urine was not albuminous. The patellar reflexes were intact. It was not till we came to the genital organs that we could detect any organic change. The epididymis of the right side was swollen; the corresponding tunica vaginalis was the seat of slight effusion, but there was no urethral discharge.

If we pricked with a pin one of the pustules on the fingers, there would issue a drop of brownish pus mingled with blood. Microscopical examination of this pus showed an enormous quantity of micro-organisms in isolated points or in pairs (monococci and diplococci); here and there a few in chains (streptococci) endowed with active movements and staining deeply with anilin; there was but a small number in the interior of leucocytes. Direct examination of the blood showed microbes in points, similar to those

of the pus. You see the difficulty we found in making a precise diagnosis of this case. We had before us a condition of infection; the patient had a multiform eruption without any determination to the viscera. Divers reasons made us reject the hypothesis of small-pox, of an abnormal form of typhoid fever, of glanders, and of Hebra's disease. If we had been able to detect a murmur over the heart, or even simply irregular, dull, or tumultuous beatings, we should have been ready from the outset to affirm without hesitation the existence of ulcerous endocarditis. But, as I have said, the examination of the heart remained negative, and the statement of the anatomical lesions will show you presently why its alterations did not manifest themselves by any morbid signs. We were, then, uncertain as to the point of entrance of the infection and the detection of a rather hard swelling of the epididymis scarcely gave us reason to suspect that this could be the starting point of the evil.

The course of the disease did not tend to give us any more light as to its origin. The three days that the patient passed in our ward were marked by a noisy delirium with invectives and restlessness, and a diarrhœa with abundant ochre-yellow discharges.

AUTOPSY.

These are the principal findings of the autopsy: On the external aspect of the thorax, embedded in the left pectoralis minor, not communicating with the thoracic cavity, a small abscess. On opening one of the little nodules on the right arm, we found it to be an intradermic abscess. Heart of normal dimensions. Myocardium soft and slightly yellowish. In left ventricle, some recent clots adherent to certain warty vegetations; the latter projected from the base of the mitral, and were covered by the endocardium; mitral orifice seemed shrunken and contracted from the auricular side; from the side of the ventricle it was intact. On the free border of the smaller segment of the valve, there were a number of irregular vegetations attached to the chordæ, of the size of a hempseed. In the tract of the large column we found a large globular vegetation with constricted neck. There were several similar vegetations along the free border of the tricuspid in the right ventricle, and several more at the point of implantation of the chordæ-tendinæ. In the infundibulum, a small yellow sub-endocardic spot, corresponding to a miliary abscess of the myocardium.

Aorta and sigmoid valves healthy.

Lungs uniformly congested, no trace of metastatic abscess or infarction anywhere.

The liver was enlarged; its capsule had kept its transparence and thinness. Underneath the capsule, we saw, scattered over the surface of the viscus, a dozen little white points the size of the head of a pin, some of them surrounded by a bright red zone. These proved to be miliary abscesses. There were also a certain number in the center of the parenchyma, and these were surrounded by a diffuse red zone of still wider extent. The hepatic tissue presented the aspect of the infectious liver. The vessels were open, dilated, and gave issue to a large quantity of blood; the parenchyma was soft and kept the impression of the finger. Besides the miliary abscesses, we observed on the surface of the organ and in its interior, numerous roundish ecchymotic spots clearly defined, without any white spots in their centre.

The gall bladder was full of very thin black bile.

The spleen was the seat of several round infarctions the size of a cherry; the organ was voluminous, soft, diffluent, weighing 265 grammes. On section, several miliary abscesses.

The pancreas was enlarged, soft, and congested.

There were several ecchymotic spots and a little miliary abscess in the interior of the stomach; also one in the mucous membrane of the rectum.

The kidneys were enlarged, and their surface was strewn with little miliary abscesses with peripheral ecchymoses. In many places there were ecchymosed spots without pus. On section, general congestion; almost equal distribution in the two kidneys of the miliary abscesses.

The pelves, ureters, and bladder were normal.

The urethral mucous membrane was intact, and showed no trace of inflammation, old or recent. The prostate gland was

somewhat augmented in size. On pressure, we could squeeze out of the distended glandular orifices a yellowish liquid, widely differing by its frankly purulent character (as determined by the microscopic examination) from the normal prostatic secretion.

The two vasa deferentia and the two vesiculæ seminales were filled with a thick and brownish pus.

The right testicle was healthy as well as the corresponding epididymis, but the left epididymis was transformed into a purulent focus, evidently old, with thickened walls; the contents were not caseous, but were constituted by a brownish pus.

There were several miliary abscesses in the cerebrum.

To sum up, the lesions noted at the autopsy were in brief these: An old suppuration of the genital passages, ulcerous endocarditis, multiple metastatic abscesses in almost all the organs.

The micro-biological examination of all these lesions gave the following results: In the pus of the miliary abscesses were found the same pathogenic microbes which had already been noted during life in the blood of the patient, and in the liquid of the pustules. A fragment of an endocardial vegetation, crushed between two glass slides and stained with methyl-violet, demonstrated to our interne, M. Besancon, that this production was almost entirely constituted by enormous masses of micro-organisms arranged in compact rows, and of the morphological variety called *staphylococcus*. It was always the same microbe, only grouped in a different fashion and arranged in columns. The pus of the epididymic focus was particularly rich in isolated or agglomerated points, diplococci, monococci, etc. Cultures of the blood and the pus were made by Netter, clinical chief of the Faculty, who has a special competence in this matter; they have given rise to the development of the *staphylococcus pyogenes aureus*, one of the varieties of the microbes of suppuration.

If during life auscultation of the heart was negative, it was, as you can easily understand, by reason of the localization of the vegetation, which did not hinder the free play of the valves.

The second patient of whom I wish to speak is a man of 64 years, a day laborer, who was admitted to Ward Piorry, Jan. 28th, in a half moribund condition. We found him greatly emaciated, with pinched features, lustreless eyes, earthy skin, and dry, black tongue; temperature between 37° and 39° C., pulse 96. The arteries were hard, and we detected at the base of the heart a double murmur which seemed connected with a general arterio-sclerosis, with localization on the sigmoid valves of the aorta. Mucous râles of the chest, abundant muco-purulent expectoration, sighing, intermittent respiration. The urine was ammoniacal and turbid, and gave a purulent deposit.

We diagnosticated a urinous fever. Catheterization, attempted with view to washing out the bladder, was found impracticable; the catheter was arrested by a stricture. The patient lay in a prostrate, semi-conscious state, and died Feb. 5th, seven days after his admission.

We indeed found at the autopsy arterial atheroma with calcareous incrustation of one of the sigmoid valves, but we noted besides, around the aortic orifice, vegetations which were friable, ulcerated, and of recent origin. The three segments of the valves were altered; two were simply indurated, the third was swollen and covered with large white vegetations, which were irregular, notched, and destroyed in part. Under this valve there was a little cavity, which seemed to indicate the existence of a purulent focus which had become during emptied life.

The other valves of the heart were not affected.

The spleen was the only organ which contained infarctions. As for the genito-urinary apparatus, it was the seat of multiple alterations. The urethra was the seat of two strictures—the one slight, in the spongy portion; the other very tight, at the neck of the bulb. The bladder, very much dilated, contained a lactescent liquid. The mucous membrane, pale, injected in spots, was but slightly altered. The muscular coat was very much thickened, and infiltrated with pus. A section practiced at the level of the neck, disclosed the existence of a localized peri-vesical suppuration; the prostate was enlarged, and its right lobe was in a state of purulent transformation.

In this second case, the micro-biological examination furnished results similar to those given by our first patient. We had to do here, as you can clearly see, with an infectious endocarditis, caused by staphylococci; micro-organisms of the same nature were found in abundance in the urine, in the prostatic and peri-vesical pus, and in the endocardial vegetations.

This case, you see, presents a great similarity to the preceding. We may say that it is just like it with this difference, that the initial focus was in one case the prostate, and in the other the epididymis, and that the suppuration, at first localized to the genital organs, came in the one patient from a stricture of the urethra, in the other from a blennorrhagia. Abscesses in the genito-urinary sphere are occasionally seen in blennorrhagia, and I myself once witnessed a suppuration of the kidneys with phlebitis of the renal vein.

These two cases seem almost of themselves enough to establish the relation between suppurations of the genital passages, septic endocarditis, and the general infection of the organism; but they do not stand alone. In an observation reported by Eisenlohr, the starting point of the endocarditis was a false passage in the urethra. In another, reported by Purser, which was almost exactly like one of our own, there was a suppuration of the left vesicula seminalis, and a cystitis. Ulcerous endocarditis has also been observed in the course of blennorrhagia, and Dr. Bourdon has this year reported a typical case of the kind.

In view of such facts, it is impossible to believe in a simple coincidence. The succession of the phenomena, the evident posteriority of the endocardial lesion, the finding of the same micro-organisms in the focus of suppuration and in the vegetations of the heart-valves, all speak in favor of the interpretation which I have given. The local suppuration is the first fact in history; from thence the micro-organisms penetrate the blood-vascular system. The endocarditis is secondary, whether it is that the germs are arrested on the valves about the line of closure, and penetrate from the surface toward the deeper parts, or whether, as Köster thinks, they constitute embolic infarctions in the ramifications of the coronary artery. The first hypothesis seems more probable and more in accordance with the results generally furnished by histological examination of the altered valves. It explains also the predominance of lesions in the neighborhood of valves formerly the subjects of morbid alterations, and whose rough and irregular surface presents a favorable situation for the lodgment and development of micro-organisms. Remark, however, that in our first patient the valves appeared exempt from all previous alterations.

The germs which we most commonly observe in cases of ulcerous endocarditis are the round micrococci variously arranged.

As far back as 1862 I wrote something concerning these granulations, which I then considered as very similar to the vibrios and as acting after the manner of ferments, for I compared the accidents associated with ulcerous endocarditis to the phenomena induced by the injection into the blood of putrefied substances. In fact, this endocarditis when once constituted becomes in its turn the point of departure for grave lesions, by giving origin to septic particles which are washed along the blood current, and, finding lodgment in the organs, cause the so-called metastatic abscesses.

In certain cases instead of the micro-organisms of which mention has just been made, we find in the valvular vegetations a lanceolated and encapsulated microbe, identical with that of pneumonia. I observed it several days ago in a woman in our hospital, of whom I shall have occasion to speak to you again, and who has succumbed to a pneumonia with ulcerous endocarditis from pneumonococci. According to Jaccoud's observations, the course of this variety of endocarditis is a little different from that with which we are concerned. The coëxistence with the pneumonia of an ulcerous endocarditis and patches of fibrinous-suppurative meningitis is not, moreover, a rare fact; I have before reported several cases.

The recent epidemic of pneumonia in this city has given us the opportunity to observe two cases of this variety of parasitic endocarditis, characterized by the presence of pneumonococci in the valvular vegetations. The first case was a woman, aged twenty-three

years, in No. 8, Ward Lorain, who entered March 11th. She had all the principal symptoms of pneumonia of the left lung, to wit, dullness on percussion at the base, blowing breathing and bronchophony: You well remember her pinched features, the red, fevered cheeks, the dry tongue, the hurried breathing, and the pain of which she complained in the left side. What is a little singular, is that the heart-beats were normal. The most careful auscultation failed to detect any murmur or any modification in the rhythm or intensity of the sounds.

The sputa were viscous, not very adherent, rose colored. Examination clearly revealed the presence of pneumonococci.

Two days after her entrance, the patient had a miscarriage. This accident did not hinder defervescence, which was complete on the twelfth day.

Recovery seemed to be assured, the patient was regaining her strength, and was asking for more to eat, but March 26th, seven days after defervescence, she was taken with a violent chill, with a temperature up to 105° F. A similar chill accompanied by an equal elevation of temperature came on the next evening, and from that time the fever never left the patient, who rapidly sank, and died in four days. The auscultatory phenomena had led us to suspect a spread of the pneumonia to the opposite side, but there was nothing to indicate that the heart was in any way involved.

What was our surprise at the autopsy to find recent, friable vegetations grafted upon an old endocarditis, whose effects revealed themselves by the cicatrices of a number of infarctions in the kidneys.

Preparations of the cardiac vegetations and of the pulmonary tissue were made by Dr. Netter, who found the encapsulated organisms called pneumonococci.

The second of our patients is a man whom you saw occupying bed No. 19, Ward Piorry. Taken May 16th with a pain in the left side, without any chill, he was obliged to leave his work and take his bed. The next day, pain in the side was worse, and not getting better by the 21st of May, he entered the hospital.

The face was congested, the eyes brilliant, the entire body covered with a viscous sweat, the dyspnœa very marked, the pain in the side persistent. On auscultation, we noticed all the signs of pneumonia of the lower lobe of the left lung; the sounds of the heart were normal; the urine acid without albumen.

The expectoration consisted of viscid sputa streaked with blood; temperature 102° F.

On the 23d and 24th the patient seemed better.

May 25th, the patient was taken in the afternoon with violent oppression. In the night he became delirious, and the temperature went up to 104° F. Dorsal decubitus; mouth open; lips trembling; tongue dry and rough; no answer to questions. There was backward deviation of the head, with stiffness of the neck; pulse feeble, 120; respiration frequent; a slight cloud of albumen in the urine. The next morning the same condition, Cheyne-Stokes respiration. Pulse small, rapid, dicrotic; temperature 104° F. The body was covered with sweat, the skin viscous, without elasticity, as in the collapse of cholera. Subsultus tendinum, conjugate deviation of the head and of the eyes to the right, stiffness of the neck. The diagnosis of meningitis was affirmed. The patient died during the afternoon. We found at the autopsy, besides the pneumonic consolidation, recent vegetations on the aortic and mitral valves, and also on the chordæ of the tricupsid valve, but we also noted in the cranial cavity the existence of a suppurative meningitis more pronounced at the base and on the right side.

The bacteriological examination was made by M. Netter, who found that the hepatized pulmonary tissue, the pus of the meningitis, the tissue of the tricuspid vegetations, after being properly stained, displayed encapsulated, ovoid microbes, identical with the pneumonococcus. Sections of the meninges and mitral vegetations showed the same organisms.

Add that M. Netter has recently described a third variety of infectious endocarditis, characterized by the presence of a bacillus usually found in the intestines.

In presence of an infection with endocardial determination, search with great care for the place of entrance of the infectious germ. You will not always discover it, any more than you will in ordinary erysipelas. But

the least external lesion, any suppuration existing anywhere, will not fail to attract the attention of the wary physician. I have known ulcerous endocarditis to supervene as a sequel to an inflamed corn, and after an amputation wound. The placental site after confinement is often the starting point of this affection, whose frequency in puerperality is well known. In all cases, it will not do to neglect the minute examination of the genital passages, even in the male. The facts which I have just reported tend to establish the relative frequency of suppurative lesions of these organs as point of origin of the endocarditis in question.

Concerning the treatment, I have but little to say.

It is chiefly preventive. Whenever the infection has taken place the patient must be carefully watched, and a supporting and stimulating treatment instituted.

Quinine—which I have often prescribed in such cases—has never given me brilliant results. I cannot say anything very favorable of salicylic acid, although one of our patients, to whom we had occasion recently to administer this medicine, and in whom we had diagnosticated ulcerous endocarditis of the mitral and aortic valves with micrococci in the blood, seemed to get better under this treatment.

ABDOMINAL SECTION WITH ITS DETAILS.*

BY E. E. MONTGOMERY, M. D.†

GENTLEMEN: The patient I bring before you this morning is a woman, thirty-two years of age, married, the mother of two children, both of whom are dead; her father died of paralysis, her mother and sisters are living and healthy; menstruation began at the age of thirteen, was regular but painful, three months ago became irregular, still attended with great pain. In June, 1876, she suffered from an attack of sepsis after childbirth, then complained of pain in back and bowels. About a week ago she complained of severe pain and tenderness in the abdomen, accompanied with vomiting and looseness of the bowels. I saw her a few days later, and found she was suffering from distension of the abdomen, marked tenderness, unable to bear the slightest pressure. The abdomen was tympanitic, the uterus retroverted and so painful that she would scarcely permit me to make an examination. She was placed upon the use of salines, given every two or three hours with a view of unloading the alimentary canal and thus making the intestines drain the peritoneum and promote the absorption of any exudation that might have taken place. The use of the salines resulted in free purgation. While there was some subsidence of the great pain she still suffers from abdominal disturbance. Upon examination after admission to the hospital here, I found a mass of exudation posterior to the uterus and the organ still painful upon pressure. We have now in this patient a history of an attack of sepsis in 1876 which without doubt has resulted in binding down of ovaries and tubes, and the development of an abnormal condition of the vessels of the pelvis. Adhesions possibly may have formed between the appendages and the intestine, causing pain and distress as the result of traction upon adhesions in peristaltic action of this viscus.

The existing disease produces an irritable condition of the peritoneum which subjects this patient to the danger of an attack of peritonitis at every exposure to dampness and cold. What the actual condition set up by the last attack is, we are unable to say, but as there is indication of exudation within the cavity of the pelvis, taken together with the previous history, we feel justified in opening the abdomen with a view of relieving the patient of whatever symptoms may be present; for that purpose I have brought her before you to-day. You will remember as I entered the room I took occasion to interrupt your tendency to applaud me; while I fully appreciate your desire to give me a generous welcome, yet my interest in the work that I propose to do before you must take first consideration. The succussion of the atmosphere produced by your applause would lead to the disturbance of dust and lurking germs that would be much more likely to be brought in contact with the

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wound and peritoneal cavity. In performing an operation of this character we exercise every precaution possible, to avoid the entrance of septic or foreign material. With a view to this we have had the patient thoroughly cleansed, the skin has been washed and scrubbed, both with soap and hot water, and with a chemical solution—preferably either the acid sublimate or peroxide of hydrogen—and a cloth wet with the sublimate solution placed over the abdomen and kept on until we are ready to expose the surface for the operation. In patients where the abdomen has been subjected to the application of counter-irritants, an excellent method of procedure is to first wash the surface with ether in order to dissolve the fatty material and promote a more thorough cleansing. In cleansing the patient special attention must be given to the pit of the umbilicus, and the lower portion of the abdomen should be shaved. The patient has had a thorough evacuation of the bowels for two purposes: First, it promotes a healthier condition of the expiratory organs and enables the patient the better to eliminate dangerous material: Second, it removes material from the intestinal track which might be the source of infection by transudation to any secretion in the peritoneal cavity. My assistant and myself have thoroughly washed our hands and arms, first with soap and hot water, giving diligent use to the nail brush, and then soaked them in a solution of acid sublimate and finally in the peroxide of hydrogen. The instruments have been thoroughly cleaned, been placed in boiling water in which they are kept until the operation is complete. Sponges should be subject to the most careful consideration; they should be so cleansed that there is no possibility of any infectious material being conveyed by them. The operator and his assistant should have their arms bare to the elbows, and the clothing covered with a sheet or apron; this prevents possible contact with the wound of the clothing of those about her, and also preserves the clothing from being soiled. The abdomen is exposed, the upper and lower portions of the body covered with blankets, the patient lying upon her back, and the surfaces about the proposed wound covered with towels which have been saturated with the sublimate solution and subsequently dried. When it is preferred moist towels may be used for this purpose, but if the patient is at all depressed it is preferable to use the dry towel. You should have as few assistants as possible; the operator should do the principal part of the work and the assistants perform that which he cannot do, under his direction. The operator is unfortunate who has an officious assistant desirous of doing more than is wanted. The operator usually stands on the right side of the patient. Being in some measure left-handed I prefer the left side, with my assistant opposite me. I propose in this patient to open the abdomen, raise up the uterus and remove the diseased organs, with any material that may be a source of danger or discomfort. The incision is made in the median line, endeavoring if possible to strike the linea alba, but as this is a mere line between the two recti muscles, I shall give myself no uneasiness if I find that my incision is directly over the muscle, but shall proceed through it instead of searching for the median line. I have seen operators open the sheath of one muscle and in their endeavor to reach the linea alba open the sheath of the opposite one. In women in whom the abdomen has been distended by previous pregnancies, the recti muscles are usually sufficiently separated to permit of the opening of the abdomen without seeing either muscle. In cutting through the tissues, the incision can be made rapidly with the skin, superficial fascia, the aponeurosis of the muscles down to the fascia, posterior to the recti muscles. In the lower fourth of the abdomen you will remember the aponeurosis is found entirely in front of the muscles, while in the upper three-fourths it splits, one half being posterior, the other anterior. Cutting through the transversalis fascia the peritoneum is reached. This portion of the incision is preferably made with probe-pointed scissors. Upon opening the peritoneum you see at once the discharge of dark colored blood, indicating that there has been an internal hæmorrhage. This may have been an extra-uterine pregnancy or the rupture of varicose vessels; the rupture of varicose vessels in the broad ligaments; the rupture of a hæmato-salpinx; or of an ovarian hæmatoma. As my fingers

pass into the abdomen we find quite a large clot in the pelvis which I now drag out. Upon the right side a sac—the remains of a distended tube—is found, which to say the least is suspicious. This is raised up and the tube and ovary removed. When I do this I find it an advantage to lengthen the incision below as the ligaments are exceedingly short and difficult to bring up. In this abdomen, with the tissues in their present condition, it is difficult to trace the broad ligament. We use the fundus of the uterus as a landmark, and pass out from it on either side; having found the tube and ovary the one in which they are matted down, the ligaments shortened, it is quite difficult to bring them up. In separating the adhesions, I pass my fingers over the ligament, and separate from below on the posterior surface, exercising precaution not to tear the ligament itself, as in so doing I might very readily tear through the tissues and rupture the ovarian artery, which would retract and give rise to a hæmorrhage very difficult to control. In ligating the broad ligament, various material is used. I must confess, however, to a hesitancy in placing in the abdominal cavity any material which will not be readily absorbed. Silk thread prepared under the most careful precautions may become infected in its introduction or by its proximity to a drainage tube or to an infected pus tube, and once being infected will remain a source of irritation, keeping open the sinus until it is entirely discharged. For this reason I have been in the habit of using the animal ligature, catgut, which I know will ultimately be absorbed. It must, however, be scrupulously prepared. My experience has not led me to trust with comfort the catgut which is prepared and sold from the various shops. It may be prepared by placing it first in ether for forty-eight hours, by which the fatty materials are dissolved out, then in either juniper oil or in a five-percent. solution of carbolic acid in which one grain of bichromate of potash is dissolved to the ounce. Catgut prepared in the latter way is more durable and consequently suitable for the stuff and sutures. The other catgut may be used for ligating smaller vessels, adhesions, etc. The broad ligament is transfixed with a ligature, and then tied in two portions. After tying the ligature I immediately cut it off, as leaving it long is a temptation to use it to drag up the stump from time to time, and in this way endanger the dragging off of the ligature and the establishment of a hæmorrhage. It is astonishing how much the peritoneum spreads out when the ligature is dragged off of the broad ligament in this way. Having ligated the broad ligament, we cut off the ovary and tube, watching the stump carefully to see if the bleeding is controlled; finding that it is, we drop it back and trouble ourselves no longer about it. We now hunt for the left ovary, starting again from the fundus of the uterus, and find that this ovary is small, formerly adherent, with a ligament so short it is with even more difficulty than the right that it is raised up. It is true that this ovary is small, but its retention would lead to a continuance of the menses with all the distress this patient has been suffering for so many years, hence I propose to remove it. Now as I drag up this broad ligament I find it difficult to form a pedicle of it, and consequently will ligate it in several sections, in this way making sure that the entire portion of the ovary is removed. I introduce my first ligature upon the outer end of the broad ligament, as through this enters the ovarian artery, and severe traction as a result induces rupture, retraction, and a dangerous hæmorrhage. The remaining portion of the ligament is ligated in two sections, and in this way the entire ovary is removed. I am thus particular in endeavoring to secure the complete removal of the ovary for the reason that I have recognized from past unpleasant experience that the retention of even a small portion of the ovary is likely to result in a continuation of the menses, and in some cases reflex influence induced by the imprisoned stump, and an exceedingly unpleasant hæmorrhagic tendency is developed. There has been great diversity of opinion as to the cause of menstruation, some, as Tait, claiming that it originates in the Fallopian tubes, independent of the ovaries, and that the recurrence of hæmorrhage subsequent to the operation has been due to portions of the tubes having been permitted to remain. I am convinced, however, that the cause is due in every case to the failure

to entirely remove the ovarian tissue. Having removed the appendages of the uterus, and having satisfied ourselves as to the control of vessels, we proceed to irrigate the cavity of the pelvis—in this way break up and wash out any clots that may still remain. As we proceed to irrigate, I move my fingers around in the bottom of the cavity to remove any clots that may have adhered, and you see these come up as we proceed. I now introduce a drainage tube, carefully raising up the uterus so that it passes behind it into the posterior cul-de-sac. In this way, it supports the uterus and drains the lower portion of the pelvis. A sponge is placed over the intestines to absorb any blood that may escape from the abdominal wound or from the sutured wounds. In introducing the sutures, I am careful to pass them through the entire wall of the abdomen in such a way as to bring the peritoneum in contact with the peritoneum, muscle with muscle, aponeurosis with aponeurosis, and skin to skin, or, in other words, to oppose each structure exactly in contact with that of the opposite side. In tying the sutures, care must be exercised that the peritoneum is not everted and the skin inverted into the wound, for a careless union of the surfaces will result in a defective ventrum and the probability of the subsequent formation of a hernia. The important structure in this union, so far as the future strength of the wall is concerned, is the aponeurosis, and care should be exercised to bring a good portion of it within the grasp of the ligature. I use curved needles, for the reason that we are better able to pass them through a small wound than a straight needle. This is particularly true where we have to operate in an abdomen in which the recti muscles are well developed and do not readily relax. I am particularly careful, in tying these sutures, not to permit the skin to be turned in on one side and lie in apposition to a raw surface upon the other. Such approximation of the surface results in defective union and slow healing. After the introduction of the sutures the wound is carefully washed with the sublimate solution, dried, covered with a strip of oiled silk as a protective to prevent the dressing from adhering to the surface of he wound. Over this I dust boracic acid, preferring it to iodoform for the reason that it is less likely to be the seat of pathological germs—many germs, as is known, thriving in iodoform. Over this some salicylated cotton is applied, and held in place by adhesive strips and a bandage. The drainage tube is emptied as soon as the wound has been closed again with the application of the dressing. It should be emptied every half hour, as long as a drain of fluid can be secured. The frequent removal of the fluid prevents it clotting in the abdominal cavity, and thus serving as a poultice to promote continuous bleeding. The drier the surface is kept, the more promptly will the capillaries contract and discontinue the oozing. The nurse should be directed to exercise the greatest caution to prevent the syringe coming in contact with the clothing of the bed, or with anything that is likely to be a means of conveying deleterious material to the abdominal cavity. The syringe should be carefully scalded out after each time it is used, and kept in a disinfectant solution. The patient will be at once conveyed to her bed, surrounded by hot bottles and kept perfectly quiet. She will be denied anything to eat or drink for the next twenty-four hours, or until her stomach has recovered from the effects of the anæsthetic, after which she will be fed as her condition will permit. Should she complain of great thirst, half a pint to a pint of warm water may be slowly injected into the rectum, and if necessary to nourish her this same viscus may be used for that purpose, injecting material that is readily absorbed into the rectum every three or four hours. If the patient complains of a great deal of pain and is restless and difficult to control, an anodyne will be given, either morphine hypodermatically, or morphine suppositories. We shall endeavor, however, to get along with but one dose. Any preparation has a deleterious effect, in that it locks up the secretions of the body and thus reduces the ability of the patient to eliminate deleterious material. If the patient complains of severe pain and the symptoms are such as to indicate the possibility of peritonitis, the quickest way of relief is by making the intestines drain the peritoneum by the use of salines. A free evacuation of the bowels will often be more effective in reliev-

ing the pain and distress than would the administration of anodynes.

ASTHMA.*

BY J. JULIUS RICHARDSON, M.D.

Asthma, is a term which up to the time of Laennec, was used to describe all conditions accompanied by embarrassed respiration with wheezing, regardless of the cause. Cases which terminated fatally and were followed up by careful dissection, revealed varied anatomical lesions. This naturally caused a reaction, and the leading practitioners and pathologists of the day declared the non-existence of asthma as a disease separate and distinct. At that time, as at the present, there were those who were constantly experimenting and carefully observing. Observation continued, aided as it was by the discovery that the small bronchial tubes contained muscular fibre, and furthered by the demonstrations that these fibres responded to an electric current, led to the belief which is almost universally accepted at the present day, that asthma is a true disease, as much so as phthisis, variola, or the continued fevers.

It is not my purpose to give an exhaustive paper on the subject, but simply to call attention to a few facts that observation may continue in the particular line, and, I trust, good results follow. What is generally termed asthma, is an affection of the small bronchial tubes in which their calibre is very much diminished, probably by spasmodic contraction of the muscular fibres. This spasmodic condition is of a periodic nature, and the attacks of dyspnœa which it causes alternate, as a rule, with periods of free respiration. This bronchial spasm theory which is so generally accepted at the present day, has had as its advocates such men as Laennec, Trousseau, T. C. Williams, and Salter. Another class of observers are of the opinion it is of diaphragmatic origin; that during an attack the diaphragm is in a condition of tonic spasm; but it seems hardly possible for this state of affairs to exist any length of time without marked asphyxia and death resulting, as the diaphragm is probably the most important factor in the respiratory movement. Sir Andrew Clarke heads the list of still another class who claim the symptoms are not due to a spasm of muscular fibres of the bronchioles, but a swelling of the mucous membrane of vaso-motor origin. They take as a basis for this theory its frequent association with urticaria, which is a vaso-motor affection.

An attack is not infrequently preceded by symptoms similar to the aura of epilepsy, and this has led one writer to claim the disease to be to the respiratory centre of the medulla oblongata, what epilepsy is to the cortical motor zone of the cerebrum. Whatever differences of opinion there may be as to the ætiology of the disease, almost all agree that it is a spasmodic condition, whether of the muscular fibres of the broncheoles, of the diaphragm, or vaso-motor spasm, causing a plethoric condition of the bronchial mucous membrane. In this as in all other affections of a spasmodic nature, with perhaps the exception of tetanoid falciform contractions of the uterus, there will be no post-mortem lesions except the predisposing cause.

The clinical picture of an asthmatic paroxysm is familiar to all. Coming on, as it does most frequently, in the early hours of morning, the patient will wake gasping for breath, the countenance pallid, and, in extreme cases, a general cyanotic experience. The pulse will be rapid and feeble, as a result of the embarrassed respiration causing an accumulation of blood on the right side of the heart. Respiration will be slow and labored, the difficulty being principally in expiration, in contradistinction to the dyspnœa of laryngismus stridulus. There will be difficulty of speech, and the patient will often seek an open door or window that he may get more oxygen; and it is a clinical fact that by so doing a cold is seldom contracted, even though it be in midwinter.

A severe paroxysm presents a very distressing spectacle. It may come on suddenly, or be preceded by symptoms for hours, or even days, which the unfortunate victim learns by sad experience seldom to mistake. The premonitory symptoms are different in different individuals, and, like the aura of epilepsy,

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are often mysterious in character and occurrence. The duration of an attack will vary from a few hours to several days, and recurrences are frequent. Cough and rather free expectoration come on as the symptoms of a paroxysm subside, and may continue for several days. The expectoration will often contain crystals of cholesterin, and Lyden was of the opinion that these irritated the nerve filaments of the bronchioles and set up the spasm. There is also observed peculiar spiral rings which were discovered by Cushman, and are known as "Cushman's casts;" these are also seen in other affections and are not pathognomonic of asthma, as was formerly supposed. The abdominal muscles will work actively, and the upper part of the thorax will be almost motionless. Physical examation will reveal difficult respiration; there will be increased resonance on percussion, as the vesicles will contain a larger amount of air; the note will be between the normal and that found in emphysema. Expiration is prolonged and feeble, and inspiration likewise feeble. There will be sibilant and sonorous râles, and towards the the end of a paroxysm a few moist râles.

The diagnosis as a rule is not difficult, but it has been mistaken for laryngeal spasm, capillary bronchitis, angina pectoris, pulmonary œdema, and emphysema. By considering carefully the physical signs and symptoms of each, I do not see how a mistake can be made, unless in a young child. Attacks may be very severe and protracted, but they involve little or no danger to life, and are calamitous in proportion to severity and frequency. No doubt, though, it lessens one's chances for a long life by diminishing the vital power to resist other maladies. One of its chief dangers is in being frequently the exciting cause of pulmonary emphysema, with the long train of distressing symptoms.

Various causes for the affection have been ascribed. It is undoubtedly a "neurosis," and heredity plays an important part in its causative relation; in a large number of cases there is a family history of dyspnœa and wheezing. I do not mean to say the disease itself is transmitted, but a peculiar neurotic temperament which will allow some trival affection to set up a violent attack of dyspnœa and wheezing, which in one without this temperament would not be affected in the least. It is like the adenoid tissue in which the bacillus of Koch is so prone to develop, in that it is transmitted from the parent to the offspring. The inheritance may be direct, or as not infrequently occurs, a whole generation may be exempt and it manifest itself in the next. Age, sex, nationality and station in life etc., are more or less predisposing causes, it being more common during the second decade, than any other decennium, and according to most observers, in the male more than in the female sex, and in the higher walks of life rather than in the low and degraded. Trousseau and Flint were both asthmatics. It is said to be very prevalent among the Jews. There are various disorders that are provocative of attacks in those who are susceptible by their peculiar organization. They may be agents which act directly on the vagus in the lungs or tubes, setting up the spasm, and those which act reflexly. Of the former we have bronchitis, either primary or as a complication of measles or whooping-cough. Attacks have been traced to emphysema, enlargement of the bronchial glands, atelectasis, aneurysm of the arch of the aorta, and non-glandular tumors of the mediastinum.

It is to the class of irritants that set up paroxysms through reflex paths, to which I wish to call especial attention. They will often be found in some remote part of the body, a fact to which I can personally testify. Uræmic conditions, rheumatic or gouty diathesis, and organic cardiac affections, have all been put down as causes, but I cannot vouch for their accuracy. Gastric disturbances, constipation and hæmorrhoids, may be provoctive of attacks, but it is not difficult to understand cases of this kind, as the vagus sends branches to the stomach, and on the right side of the organ they communicate with the splanchnic nerves, the great sympathetic nervous supply of the lower portion of the prima via. I believe at least ninety per cent. of the cases result from lesions in the upper portion of the breathing apparatus. Doubtless most of my readers are thoroughly acquainted with the sins of the nose: Along with chorea, vertigo, epilepsy, sick headache, melancholia, eye

troubles, etc., which they often undoubtedly cause, we have asthma. Perhaps there are some who look upon this as simply the hobby of a specialist; but mark me, time, careful observation, and experiment, will prove it the contrary. In my own practice, in the last few months I have examined quite a number of asthmatic subjects. In each case a most careful examination of the nasal cavities was made. In all except one case I found some part of the nose badly diseased or deformed, or lesions in the naso-pharynx. These lesions occur too frequently in connection with the malady not to be intimately associated with its cause. I not only have clinical facts to bear me out in advocating these views, but experiments upon those who are predisposed. For example, I saw one case where there was a small spot in the floor of the nose that was hyperæsthetic, and a well marked paroxysm could be set up at will by irritating this sensitive area.

There does not seem to be anything definite as to the nature and situation of the disease of nasal cavities, but it may be a deflected septum, cartilaginous or osseous spurs of the septum, nasal polypi, or hypertrophic rhinitis. In the majority of my cases there has been hypertrophic rhinitis with very much enlarged turbinated bodies; the middle turbinated bones will be seen to fit like a wedge high up in the cavity and press on the septum. Quite recently a child was brought to me from a distance who had been subject to attacks for several years. I examined the nose and found she had hypertrophic nasal catarrh. I introduced a probe into the nose, irritated the part, and allowed it to remain while I held my ear to the chest. In a very short time the child said one of her "spells" was coming on, and I could hear the sibilant and sonorous râles—the characteristic auscultatory signs of the disease. In order to thoroughly convince myself in regard to the matter, the experiment was repeated several times with the same result. On the removal of the probe the physical signs would disappear. I also observed that the râles would be heard first over the lung opposite to the nasal cavity in which the probe was introduced.

We often hear of odors, dust, pollen of plants, etc., being obnoxious to certain individuals and setting up very distressing symptoms in this particular line. How can we possibly account for this except by accepting this intra-nasal disturbance? And further, all asthmatics who use antispasmodics by inhalation, declare they get better results by inhaling the fumes through the nose than the mouth. I am not prepared, with my present knowledge of anatomy and physiology, to give the direct circuit which an impression starting in the nose will take, but hope to be able to do so before a great length of time. The pneumogastric nerve is intimately associated, anatomically and physiologically, with other nerves about the nose, and in fact one of its own branches extends high up in the naso-pharynx.

The treatment consists in treating the neurotic condition, the paroxysm, and if possible removing the exciting cause. For the former, iodide of potassium in large doses is favorable thought of, and the same may be said of the bromides. Arsenic and various other agents are used. For the paroxysm I believe the most prompt and best agent to use is the hydrochlorate of cocaine, a four per cent. solution of the large crystals manufactured by Parke, Davis & Co. It is to be used as a spray in the nose, with a hand ball atomizer, every few minutes until the symptoms subside; or a pledget of cotton saturated with the solution may be introduced into the nasal cavities and allowed to remain a few minutes. The results in the majority of cases are truly marvellous, and this is another fact which confirms the intra-nasal origin of the disease. Grindelia robusta, a Californian remedy, it is said has great power of arresting a paroxysm. There are many others, such as belladonna and stramonium leaves, nitre paper, nitrites, morphia, atropia (the two last hypodermatically), and inhalation of chloroform, etc. The whole secret, though, in treating successfully this class of cases is to diligently search for the hidden cause, and remove it if possible. If polypi, spurs of the septum, etc., are the origin, remove them by modern methods; if hypertrophic nasal catarrh, reduce the hypertrophies and provide for free drainage in the nose. In order to do the latter it may be necessary to remove the

middle turbinated bones, an operation easily performed. Where there are spots of hyperæsthesia, destroy them by the use of the Galvano-cautery, an instrument which every practitioner should possess.

Case 1.—I was called this last winter to see a lady about 65 years of age who for six weeks had been suffering almost constantly with asthma. During that time she had been unable to sleep in the recumbent posture, but was obliged to be propped up in a bed or a chair. She had chronic bronchitis and some resulting emphysema. At the time I saw the case she was gasping for breath, and the wheezing could be distinctly heard in the adjoining room. The patient thought every breath she drew would probably be the last. Examination of the nasal cavity was made, and showed considerable inflammatory trouble in the right cavity. I found by questioning the nose had been sore for about six weeks—ever since the beginning of the asthma, but it had not occurred to her that it was associated with the difficult breathing. A solution of cocaine was applied to the nose on a pledget of absorbent cotton, and within five minutes the woman was breathing as easy and free as ever.

The following night she was able to lie down and get a good night's rest, the first for weeks. The nasal trouble was treated by sprays, and when there would be a tendency to wheezing the cocaine would be applied, immediately aborting the attack. When the local trouble was removed there was no more asthma. Unfortunately the woman died a few months later of bronch-pneumonia.

Case 2.—In the spring of 1889, a young man presented himself at my office with the request I would relieve him of asthmatic attacks to which he had been subject for about seven years. Seldom a week would pass without two or three paroxysms. Knowing the disease to be a neurotic one, and in all probability the result of an irritant, I resolved to find out if possible its situation, and remove it. He informed me the hearing in one ear was slightly impaired. Introducing the ear speculum I found a huge mass of impacted hard and dry cerumen which filled the whole external auditory meatus. By using the ear syringe, with a pint of water in which a drachm of bicarbonate of soda had been dissolved, I succeeded in removing the huge mass, and could hardly convince the patient it came from his ear. The patient was at one cured of his asthmatic attacks and without further medication; nine months afterwards, he informed me he had not since been bothered with asthma.

In a recent conversation with a noted aurist of New York, whose cases of impacted cerumen number among the thousands, I was informed he had never seen a case of the kind. Prof. Roosa though, I believe, has reported a couple of cases. A few years ago my friend, Dr. Lowther, was called upon to remove a mass of cerumen from the ear of one of his asthmatic subjects on account of the deafness it produced. After the removal, very much to the surprise of both patient and physician, there were no more asthmatic attacks. By considering our anatomy, applying our physiology, and accepting certain theories as to the ætiology of the disease, it is not at all difficult for us to understand the mechanism by which it is produced. The external auditory meatus has, as a part of its nerve supply, the auricular magnus nerve. According to standard anatomical works, in a very limited number of cases there is a communication between the auricular magnus and pneumogastric in the jugular fossa. This anatomical condition would make the nerve circuit complete—an impression starting in the ear.

Moundsville, W. Va.

SYRUP TRIFOLIUM COMP.

BY W. THORNTON PARKER, M.D.

A really valuable remedy like the Syrup Trifolium Comp. deserves the confidence of the profession and the gratitude of those who have been benefited by its exhibition. Four cases in my practice especially deserve notice in this connection. In upwards of a hundred cases, mostly of obstinate rheumatic affections, Syrup Trifolium Comp. (P., D. & Co.) has been remarkably efficacious, and previous to its use no other remedies have at all equalled it in relieving the sufferers from this obstinate and painful disease. The cases which have especially attracted my at-

tention are as follows: No. 1, case of chronic eczema: No. 2, severe and obstinate rheumatic affection: No. 3, menstrual disorder associated with profound anæmia, and: No. 4, a case of tertiary syphilis.

In case of chronic eczema referred to, the patient was a married woman, aged 33, American born. The body, including face, hands and feet, was almost entirely covered with the disease. The appearance of the patient was most repulsive and distressing. Under the care of several physicians, she had taken without avail vast quantities of various remedies internally. Coming under my care in June, I prescribed for her the Syrup Trifolium Comp., a ferruginous tonic, and externally an ointment of borax and glycerin. Very shortly after beginning this treatment improvement set in and continued until within twelve weeks complete cure resulted. This case is the most remarkable one of the kind which I have ever treated.

The case of chronic rheumatism which I have referred to is like many others, differing only in the severity of the attacks, and the pain and general lameness present in the legs. Many remedies had been given without any apparent relief. The Syrup Trifolium Comp. succeeded in the most satisfactory manner.

In the case of menstrual irregularity associated with a general systemic deterioration, it occurred to me that some reliable eliminative was indicated, and that after using a bottle or two of the Syrup of Trifolium Comp. the treatment with a ferruginous tonic (Elix. Ferri Succinat,—hydrated) would be more likely to be successful. Acting on this theory, I found most beneficial results; the patient rapidly recovered.

In the fourth case, I have never seen syphilitic symptoms disappear so steadily.

These few cases from my note book illustrate how largely my confidence has been increased in this valuable remedy. It is the alterative *par excellence* at present attainable, and in general practice I make use of it daily. Dermatological cases are especially suited for its exhibition, but in rheumatic and syphilitic affections it acts almost as a specific.

Manchester-by-the-Sea, Oct. 4th, 1891.

A CLINICAL LECTURE.*

BY DR. F. DELAFIELD.

Case 1.—This boy, 15 years old, by occupation a clerk, states he was in perfect health until three weeks ago, when was noticed a swelling of the legs which has continued up to the present time. This is absolutely the only symptom he complains of. His urine has been examined three times, with the following result: Specific gravity, 1017; albumen, 50 per cent.; hyaline and epithelial casts; pus and epithelial cells. When first he came under observation he had a high tension and was given nitroglycerin. His pulse now seems normal. Examination shows the heart's action to be somewhat exaggerated; a systolic murmur can be heard in the second left intercostal space and at the apex. The apex is a little further to the left than it should be, showing a moderate hypertrophy of the left ventricle. The boy looks well nourished—rather fat, but slightly anæmic. The sclerotic of the eye is somewhat whiter than normal. I think there is some swelling of the abdominal cavity.

There is no question that this boy is suffering from an acute or sub-acute nephritis, and it also evident it has not existed for any length of time. The diagnosis is between simple acute exudative nephritis and acute diffuse nephritis. The diagnosis is important because of the progress.

In the simple exudative form there are no permanent changes in the kidney and the patient gets well: In the diffuse form, on the contrary, the changes in the kidney are permanent and the disease is apt to become chronic. In both of these forms there is considerable exudation from the blood vessels, hence we find albumen, casts, and epithelium. The lower specific gravity belongs to the diffuse rather than to the exudative form; the dropsy and the anæmia may occur in either; also the increased arterial tension, although we are more apt to have it with the diffuse than with the acute. The hypertrophy of the left ventricle can also be found with either form, but it again is more common with the diffuse than the acute.

*At the Vanderbilt Clinic, New York, Oct. 8th, 1891.

The main reason for believing this is an example of the diffuse rather than the simple exudative form of nephritis is, the comparative absence of symptoms. A case beginning in this quiet sort of way, ninety-nine times in one hundred indicates the diffuse rather than simple exudative form, and the prognosis is not good as to ultimate termination. It is probable the boy will get better and perhaps remain in good health for a long time. He may go on for many years with a diseased kidney and from time to time—especially in the winter—his symptoms return.

As to the treatment: One of the best things to do, if these cases are seen early, is to put them to bed. In the second place, they should be put on a milk diet, and if there is any increase in the arterial tension it can be treated with nitro-glycerin or similar drugs. Then wait and see if the dropsy will not disappear without further treatment. If not, the hot air bath is very efficacious. After the dropsy has disappeared we can begin giving solid food, commencing with one meal a day. Then give iron and let the patient get out. The health of such patients is often much improved by sending them to a suitable climate—like Southern California—for the winter.

Case 2.—This woman was at the clinic last May, and it was then believed she was suffering from pernicious anæmia. Her history was that she had never had malaria; that she had no illness for twenty years. For a year preceding last May she began suffering from weakness, loss of appetite, and swelling of the feet. She was pale, had palpitation of the heart and dyspnœa on exertion. An examination of the urine showed negative results. An examination of the blood showed a diminution in the number of red blood cells and the quantity of hæmoglobin. She was sent to Roosevelt Hospital and remained there for some months. The treatment consisted of arsenic and iron, under which she improved for a time, and then became worse. At the present time the urine contains a small amount of albumen—one per cent. Her face, including lips, is somewhat pale. Cases of pernicious anæmia usually behave in this manner. The patients improve up to a certain point and then fall back to their original condition. The one drug which seems to be the most efficacious is arsenic. It should be carried up to the point of tolerance—as much as can be taken without getting the poisonous effect. Iron alone is of little service, but it can be added to the arsenic. Blaud's pill, containiug the sulphate of iron, is perhaps the best form of administration—three pills after each meal. We can begin with one-sixtieth of a grain of the arsenious acid, and gradually increase it to one-fortieth or one-twentieth, three times a day. Or, instead, three drops of Fowler's solution, increasing it to ten or twelve drops, three times a day. The treatment must be continued for some time, occasionally intermitting it for a week or so.

Case 3.—This man, about 45 years of age, came here first on August 19th. He states that since last May he has not been in good health; feels tired, weak, dizzy, and has attacks of nausea and sweating, yet there is no vomiting. There is a murmur at the apex of the heart. The urine contains neither albumen nor casts. An examination of his blood on October 6th showed four millions of red blood cells (instead of five millions), and 45 per cent. of hæmoglobin (instead of 100 per cent.) This is a very good example of the cases which are apparently suffering from anæmia, and yet we are in doubt as to whether the anæmia is primary or secondary. So far as the man's symptoms are concerned, they go very well with primary anæmia; but they can also be produced by any chronic disease affecting the general health. He tells me he has been subject to attacks of diarrhœa—especially in summer—lasting for several weeks. He was first treated with naphthalin, bismuth, strychnine and iron. That treatment would answer well enough for a secondary anæmia, but not for a primary. Yet there seems to be no question that this man has improved a good deal. He is still paler than he should be, however; the pallor in the conjunctiva has a slight tinge of yellow. His pulse is feeble. There is a considerable decrease in the quantity of hæmoglobin, and the number of red cells, but it is not the sort of blood that belongs to pernicious anæmia. In pernicious anæmia, with 45 per cent. of hæmoglobin, we should have less than two millions

of red cells, instead of four millions, as it is in this case. In making our diagnosis, of course, we are dependent upon the accuracy of the examination of the blood, and it is of the utmost importance that it should be correct. These patients are often very puzzling. We are obliged to take time and make, not a single examination, but a number of examinations, and ascertain if the patient has not some organic disease which is giving local symptoms. We examine the lungs, the heart, the liver, the kidneys, and the urine. If then unable to find anything, we must relegate the case to that class which I have, for my own convenience, recognized as a distinct clinical condition. Besides the cases of simple anæmia in young women, and of pernicious anæmia occurring at any age, I have had to recognize cases of essential anæmia occurring in middle-aged persons which do not belong to either of the above. In treating the anæmia of young women, the one thing is iron. In pernicious anæmia, as I have said, the one drug is arsenic. The third class of cases which I have refered to, and in which I should include this patient, are often improved by general treatment without either arsenic or iron. What the ultimate prognosis in these cases is, I hardly know. They improve, and then are likely to have a relapse. It is a form of anæmia which we see more frequently in private practice than in the hospital or dispensary.

New York.

CLINICAL NOTES.

BEEF MEAL, BEEF CACAO, AND BEEF JELLY.

Dr. Oscar Stobaeus, of Munich, Bavaria, writes:

"Beef Meal is a bright yellow, very fine powder, of slightly pronounced but agreeable odor. It has the advantage over all other preparations known to me, of great palatability—a factor of the utmost importance with many patients. The mode of administering the Beef Meal varied; it was boiled 15 to 20 minutes in meat-soups or bouillon, or used itself for making the latter. In that case pot-herbs were also employed, and, besides the salt, a little pure beef-fat or gravy added. The action was always invigorating and superior to that following the partaking of meat-broth in that the sensation of satisfied hunger was very pronounced and lasting. Given with bread and butter, the beef-meal was always eaten with relish, and its pure taste commended. I must lay special emphasis on this last property, for on account of the disagreeable taste of the meat powders, *carne pura*, etc., known to me, a repugnance is usually aroused in the patient.

"Absorption of the Beef Meal in the intestine seems to be complete. I have also tried the Beef Meal with children of tender age; in all its forms of administration, it was readily taken, well borne and easily digested. It is to be hoped that with increasing sale, a reduction in price will be rendered possible, rendering its virtues accessible to the less well-to-do.

"With respect to Beef Cacao, the same praise holds good. It is very palatable, invigorating, nourishing and satisfying, whether prepared with water alone, or with milk and sugar. The constipating action of ordinary varieties of cacao is altogether lacking, and at the same time it is well borne by every stomach—even that of the sensitive child.

"I may, of course, assume the preparations will always be of uniform quality. In that event, I may express the judgment, based on numerous experiments, that I regard the preparations mentioned as very valuable and worthy of increased demand."

Dr. Strohschein, of Würzburg, says:

"I must praise the pleasant taste of the Mosquera preparations, with special reference to the Beef Meal, while all similar preparations have usually a disagreeable taste. The readiness with which the Beef Meal may be suspended in water and soups is also remarkable. The fact that clear soups are rendered turbid is of no moment. I have been struck with the fact that inferior soups have been astonishingly improved by the addition of Beef Meal."

Dr. George Schmitz, of Cologne, reports the use of the Mosquera preparations, Beef Meal and Beef Cacao, "have proved so eminently satisfactory," that he can only hope for their regular employment by his patients.

Dr. Clemens, of Branweiler, declares he has "achieved excellent results in several cases complicated with prostrated digestion (subacute renal inflammation, intestinal ca-

tarrh, convalescence after apoplexy)," and dwells upon the fact that the preparations were taken steadily by his patients.

Dr. Kettler, of Berlin, reports his "successful employment of Beef Cacao in a state of operation for cancer, stating the preparation has "proved fully equal to the anticipations" which he had formed, on the basis of prior reports.

Dr. L. Marquarat, sworn chemist, Hamburg, says in a treatise "On Meat Preparations:"

"It will be evident that a meat product must embody the following properties, in order to possess the merit of a complete, readily digestible and concentrated meat food:

"It must contain all the constituents of the beef. They should be in a state of fine subdivision. The albuminates must be present, in a great measure in the form of peptone. The fat should be finely emulsified, in order to be readily absorbed. The product must prove permanent on storing. Finally, the pleasant taste must not be sacrificed in the process of manufacture.

"These requirements are fulfilled by Mosquera's Beef Meal in a full measure, and it is therefore calculated to occupy a conspicuous position amongst dietetic nutrients, and to render important service to medicine, aside from the fact that it may be employed as a perfect substitute for fresh meat where the latter is not procurable."

Dr. Agéton, of Hamburg, writes:

"With respect to Beef Meal, I can report only the best results from its action, and I have no doubt that the product will soon be generally introduced amongst both physicians and laymen.

"Different from all similar preparations, it possesses, first of all, great palatability, and is hence willingly taken by most patients. We must, of course, distinguish those patients who suffer from general nausea and repugnance to all foods and peptone-like nutrients. All other patients, however, take it very readily.

"I have employed it in all possible forms of disease of the gastro-intestinal canal, and with special success in those cases where, on account of abnormal sensitiveness, more compact meat-food cannot and should not be taken. But the Beef Meal renders excellent service, not only in the diseases of the digestive apparatus, but also in all instances in which it is desired to administer meat in concentrated form, especially, therefore, after severe exhausting diseases; such as typhus, pneumonia and, finally, in chronic diseases of the lungs.

"I learned to place special value on Beef Meal *in the nourishment of children of tender years*, hence in the transition period between an exclusive milk-diet and mixed feeding. Meat is not well borne by small children, as they do not masticate properly, and the needful gastric juice is not yet present in sufficient abundance. Here, therefore, excellent service is rendered by meat which is in powdered form and, moreover, partly dissolved; and such a beef preparation should really be in the possession of every family with small children.

"I give daily one to two teaspoonfuls of Beef Meal to a child of 1½ years, in oatmeal, rice, sago or barley gruel, with an egg stirred in, or added to milk and rice, or to cacao, or strewn on buttered bread.

"Given in this form, it is very readily taken by children, well borne and digested, and it saves the trouble of scraping the same meat, chopping it up fine, etc.

"Taken all in all, I may make the most favorable prognosis for Beef Meal, and I shall in the future continue to recommend it and emphasize its advantages."

Dr. Rud. Wolf, of Hamburg, Physician in Charge at the Masonic Hospital, under date of July 2d, says: "I have made a prolonged trial of the Mosquera Beef-Meal, both in hospital and in private practice, and have found it to be an excellent nutrient for the sick and convalescing. It nourishes and invigorates, without disturbing even the most delicate stomach. I shall be happy to recommend the remedy in the future."

Prof. Dr. Ernst Ludwig, Corresponding Member of the Academy of Sciences, Professor of Applied Medical Chemistry, and Director of the Chemical Laboratory in the Patholo.-Anatomical Institute of the General Hospital, Vienna, reports (Sept. 23d, 1891) as follows with reference to a chemical investigation of Mosquera's Beef Jelly:

Water		32.30	per cent.
Ash—soluble in water	11.1		
insoluble	3.3	14.40	"
Albumen, chiefly peptone,		53.40	"

Mosquera's Beef-Meal he finds yields:

Neutral fat		11.58	per cent.
Ash constituents—			
soluble	2.28		
insoluble	1.23	3.51	"
Soluble albuminoids (peptone, albumoses)		21.61	"
Insoluble albuminoids		52.80	"
Water		10.50	"

"Mosquera's Beef-Meal may be stored, so far as my experience extends, for several months without undergoing modification. The nutritive value of this preparation is four times as great as that of lean beef."

PROGRESS IN PUBLIC HEALTH WORK IN MICHIGAN.*

In 1889, the Michigan State Board of Health resolved that the local Boards of Health throughout the State be urged to second the action of the State Board of Health by making "regulations" declaring typhoid fever a "disease dangerous to the public health," which should be reported to the Health Officer in accordance with the law. Also, that in the opinion of this Board all cases of so-called "typho-malarial fever" should be reported to the Health Officer, and the same precautions taken as in cases of typhoid fever. Also, that all cases of fever of doubtful origin continuing more than seven days should be reported to the Health Officer, and precautions taken as in other diseases dangerous to the public health, such as typhoid fever.

Since this action of the State Board of Health, it seems that a less proportion than formerly of the cases of fever are reported as "typho-malarial," and an increasing proportion of the cases of typhoid fever which occur are undoubtedly being reported to the State Board of Health. The local Boards of Health are beginning to co-operate with the State Board; thus at its meeting, Oct. 16th, 1891, the Board of Health of the city of Alpena adopted substantially the same resolutions as those adopted by the State Board; and restrictive measures for the prevention of typhoid fever are coming to be general throughout Michigan. There was need for it, because the vital statistics indicate that about a thousand lives a year were being lost in Michigan from this preventable disease.

*Report of Secretary Michigan State Board of Health.

Correspondence.

NEW YORK LETTER.

Annual Meeting of the Medical Society of the County of New York—Eighth Annual Meeting of the New York State Medical Association—Early Surgical Interference in Intussusception—Suit Against Dr. Alexander S. Hunter for $20,000 Instituted by Dr. David Bartlett Decided in Favor of Defendant—The Treatment of Gonorrhœa in Drug Shops.

NEW YORK, October 31st, 1891.

At the 86th Annual Meeting of the Medical Society of the County of New York, on Monday evening, an election of officers was held for the ensuing year. The nominations for President were Dr. Orlando B. Douglas (the present incumbent) and Dr. George H. Fox. One hundred and sixty-six ballots were cast, of which Dr. Fox received 92 and Dr. Douglas 74. Dr. Fox is Professor of Diseases of the Skin at the New York College of Physicians and Surgeons, and President of the New York Dermatological Society. Dr. Seneca D. Powell was elected Vice-President; Dr. Charles L. Dana, 2d Vice-President; Dr. Charles H. Avery, Secretary; Dr. William E. Bullard, Assistant Secretary; and Dr. John S. Warren, Treasurer.

The 8th Annual Meeting of the New York State Medical Association was held in this city on Wednesday, Thursday and Friday of this week. The Association held three sessions daily, and many excellent papers were presented. On Wednesday evening Dr. Nicholas Senn made an address on the surgical treatment of stenosis of the pyloric office of the stomach, and gave a practical illustration on portions of the cadaver, showing how the deep and superficial sutures were applied in operations on the stomach, and exhibiting wooden models of the plates used in approximating the coats of the stomach and small intestines in the operation of gastro-enterostomy.

Dr. Senn's address was extremely interesting; so much so that, although he spoke for over two hours and it was after 11 o'clock when he finished, not one of the crowded audience left, and the hall was so quiet that when one of the physicians present dropped

his hat, it made such a startling noise that everyone turned around and frowned on him. At the conclusion of his address, Dr. Ferguson, the Secretary of the Association, stated that whatever feelings of rivalry might exist between New York and Chicago as regards population, in view of the proposed lunar annex to be made by the latter city, this rivalry did not extend to the medical profession, and on behalf of the members of the Association he desired to thank Dr. Senn for his interesting and instructive lesson in surgery.

At the New York Polyclinic a few days ago, Dr. Wyeth gave the history of a case of intussusception of the bowels that had come under his observation, and he endeavored to impress upon the physicians present the importance of early operation in such cases in order to save life. He said it reminded him of a history of Patrick Henry he had just been reading. Patrick Henry is supposed to have had intussusception. The attending physician purged him without producing any effect. At last he brought in a large bottle of liquid mercury. When the patriot and statesman saw it he said his prayers, swallowed the dose of mercury, and promptly died. Surgical interference, Dr. Wyeth concluded, might have saved him. George Washington who is said to have died of œdema of the glottis might perhaps have had his life prolonged by any surgeon who was competent to open the larynx.

An interesting law suit was decided in the Court of Common Pleas to-day. Dr. David Bartlett Gould applied for membership in the New York Academy of Medicine and was blackballed. In consequence of this he sued Dr. Alexander S. Hunter for $20,000 damages, swearing that the latter gentleman called him an unscrupulous practitioner before a committee of the Academy, and accused him of unprofessional conduct. Dr. Hunter denies these charges, and his testimony is corroborated by fifteen witnesses, all prominent physicians and members of the Academy and County Medical Society. The jury decided the case in favor of the defendant.

At a meeting of the Genito-Urinary Section of the American Medical Congress, recently held in Washington, one of the speakers stated that "gonorrhœa was too often treated in the drug-shops." This fact is so well known to the rank and file of the profession that it hardly requires verification. In the majority of cases the druggist's remedy is found to consist of a solution of zinc sulphate, or the external or internal use of cubeba. One recommends a decoction made by soaking a handful of cubebs in rum, while another, an old German druggist, places the utmost confidence in the efficacy of a claret debauch. These are guaranteed to be "sure cures," and one is impressed with the vast number of specifics that exist, not only among druggists but among laymen as well, for a disease which often proves intractable in the hands of a competent physician.

PHYSICIANS AS FINANCIERS.

Physicians are generally admitted to be exceedingly poor financiers. There is probably no class of men who realize so little financially from their labors. Persons are often astonished in how straightened circumstances many physicians (who were known during life to have had large practices), on dying, leave their families. They lived moderately, indulged in no luxuries, yet, after all debts have been paid little will be left to the families of each one.

For the last twenty-five or thirty years, efforts have been made to simplify the business books of physicians, so that as little time as possible would be required for a medical man to enter his charges, and keep something like a systematic account of his business. It has been found impossible for one engaged in the active practice of medicine to keep what is called a day-book, cash-book and a ledger, for with such a set of books, oftentimes not having time to enter any charges for two or three days, he will let his ledger go unposted for weeks and months, and when called upon to make out a bill, he will in consequence, not be able, and will be under the necessity to ask the applicant to call again.

Call or visiting lists have been constructed to enable physicians more easily to keep account of their services; and every physician should avail himself of this ready and simple method of keeping an accurate record of his visits.

A. D. B.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE LIMITS OF ENTHUSIASM.

Not unworthy of a noble and distinguished professional career were the impressive words of Prof. Nothnagel, spoken at the banquet given in honor of his fiftieth birthday by his assembled colleagues and pupils at Vienna on September 30th. Recalling his obscure entrance into this center of medical science nine years before, and drawing inspiration from the honors of the evening, Prof. Nothnagel gave utterance to a sentiment which merits applause from the scientific men of all lands.

"Approach all scientific questions," he said, "with cold, sober reason and realism; in all human relations, keep alive your warmest enthusiasm and your loftiest idealism."

It would be difficult to conceive a happier or terser synopsis of the motives which should animate a medical man in his double character as scientist and citizen. To hold himself aloof from theological preposessions, to ignore the sentimental aspects of scientific problems, to emancipate himself from the bias of the schools and the conservatism of long-cherished belief—these are the duties which clamor for fulfillment on the part of every earnest and honest student of nature. Truth is his guide and goddess, and, in his capacity as scientist not one whit of his devotion is due to any other divinity. Weighing all things, and following his reason with unfaltering trust, he may be assured that the painful overthrow of present convictions will be followed by abundant compensations, for the truth is never permanently destructive. Out of the chaos of opinion resulting from rigid and impartial investigation will arise a host of beliefs capable of sustaining the most destructive criticism.

But Prof. Nothnagel's exhortation is likewise an admonition—a warning against the cheap pessimism and the cold-hearted indifference to human interests, which absorption in scientific pursuits is often alleged to foster. Our human relations are not to be sacrificed to our scientific ardor. If truth be the end of science, humanity is surely the best-loved child of truth. The student of medicine whose devotion to science for its own sake stifles his interest in the progress of his race, his sympathy for human suffering, or those enthusiasms which ignore even the higher forms of egoism—is surely degenerating into a science-chopping machine, mechanical in action and devoid of human motive. What the *scientist* may thus gain, the *man* inevitably loses. That the loss is the greater will scarcely be questioned by those who value properly the humanitarian endeavor by which a liberal profession is ennobled.

PHYSICAL CULTURE, ANCIENT AND MODERN.

In a lecture delivered at the Rush Medical College, John B. Hamilton, M. D., LL. D., makes an earnest appeal for the necessity of physical culture from childhood to adult life.

Dr. Hamilton reviews in a scholarly manner ancient, mediæval and modern methods of physical culture, and points out the significant fact that the nations who have risen to the highest stages of intellectual and material development have been those who gave most attention to the culture and symmetrical healthful developments of the body.

He applauds modern efforts to encourage out-door sports, and the establishment of gymnasiæ, but believes that what is needed now is not the growth of professional athletism, but the systematic establishment of proper methods of bodily exercise in the primary and preparatory schools.

This appeal is a timely one, and though some physiologists may claim that there is in all living beings a certain impulse given at the time of impregnation which gradually fades out with greater or less rapidity, depending on the innate virility of the impulse, and which, when exhausted, ends in death,

nevertheless all experience goes to prove that many physical defects and predispositions to disease may be corrected or favorably modified under the judicious employment of special exercises.

Dr. Hamilton concludes his lecture with the following pertinent suggestions as to existing conditions and the proper means of securing progress and further perfection in the physical training of children:

What, he inquires, are we doing for the young children? A few Western cities, under the directly stimulating examples of the Turners and the athletic clubs, have begun to establish gymnasia in connection with the regular instruction of the school, and paid teachers of gymnastics have begun to be employed, notably at Chicago and Kansas City; but the melancholy fact remains that the majority of our primary schools are absolutely without any provision for the most elementary physical training. The primary school should be the place where the body is made to grow straight, where all the muscles are exercised properly, and where the young, tender brain is nourished by blood made healthy through active circulation. The colleges are doing good work with the youths and young women, and the clubs and Turn societies maintain and keep up the physical standard thus acquired, but the college instructors should have youths sent them with some sort of preliminary physical training. At the preparatory school he begins his classics, his mathematics and physics. Why should he not also begin his physical training at the preparatory? Not only would the results be more perfect when thus commenced, but when we remember that the majority of our youth do not enter college at all, we then realize that unless the primary school be made the place of beginning, the work is never commenced.

When one sees the sickly, stoop-shouldered, knock-kneed, feeble children attempting to become educated men and women, there is no longer reason to wonder at the marvelous increase of our insane. Every State in our Union has to annually increase the accommodations for the insane. If this necessity were confined to those States where the population increased with equal pace, it could be accounted for; but we see those States in which there is no increase of population year after year adding to the insane class. This is largely the result of physical degeneration, as shown in flabby muscles, disinclination to exercise, and unhealthy blood. We want no *class* improvement, but we want universal attention to physical training from childhood to adult life; and until the State Governments take up the matter as a patriotic duty, we must encourage private gymnasia.

The physical retrograde condition of our native stock cannot be corrected by encouragement of professional athletes. It is well to have a Sullivan to show what may be done by one-sided cultivation, as a specimen of magnificent muscle; a Winship to teach us the physical fact that a man's lifting power can be increased to an almost incredible degree; but these are not the kind of specimens after which to fashion a race. Let us have the highest types of beauty, deftness, and strength, combined with mental vigor and chivalrous virtue. Let us have women like her of whom the poet said: "Grace was in all her steps, heaven in her eye; in every gesture dignity and love." And let us have strong men. Let the medical students of this college set the example. Your strong, healthy, vigorous man is never irritable, never "nervous;" he is generous, and he sleeps at night. He is worth something to his country and to all mankind. He exercises his muscles; the blood flows freely in his veins; he is hungry; he digests his food; his brain is nourished, and his mental faculties are active. He lives, and the world is better because he lives. I love to look at a bright, happy-faced man, who takes a full breath and expands his chest; who looks at the rising sun without blinking, and whose face glows with the animation lent it by a pure soul, unvexed by an irritable body. Think what glorious soldiers a regiment of such men would make! How the arts and sciences would flourish under the general stimulus of strong America! Our beloved country would indeed become blessed. Our new America, strengthened by exercise, made happy by good health, might easily outshine the glories of the golden age of Greece, and, "like precious stone set in silver sea," flash its beauty to the sun.

THE TREATMENT OF CANCER.

Drs. B. Farquhar Curtis and Wm. T. Bull in an article on the treatment of cancer and other tumors, in Harper's Monthly, describe in untechnical language intelligible to the unprofessional reader, the nature of cancer and tumors to the extent that existing knowledge of their character permits of.

While admitting the difficulty of positive diagnosis in some cases, they advance the

opinion that when diagnosis is doubtful, the rule should be to exercise abnormal growths of a suspected malignant nature, rather than expose the patient to the possibility of general infection.

Statistics, as far as available, indicate that cancer is on the increase; and it is lamentably true, as these writers pointedly state, that many cases in their incipient stage, when surgical procedures might relieve, fall into the hands of quacks whose promises of cure, and dilatory and futile palliative measures, if not dangerous procedures, permit the progress of infection until such cases are beyond surgical aid.

The results of the treatment of cancer by extirpation are steadily improving, and the number of cases radically cured is increasing. It is therefore the duty of the family physician to impress upon this class of his patients the necessity for early and thorough examination of any abnormal growth, and the determination being clearly reached of its malignant character, or being in doubt, to encourage prompt resort to surgical aid. To delay is to make a deliberate attempt at suicide.

Drs. Curtis and Bull call attention to the necessity for the systematic application of the recent advances in the surgical treatment of cancer, and in this connection allude to New York Cancer Hospital which is equipped with all that modern surgical knowledge and skill can devise to place such patients under the best possible condition for cure.

We believe the intelligent presentation of the facts covered in the article of Drs. Curtis and Bull to the general reader, in so widely circulated a medium as Harper's Magazine, will do much to dissipate the prevailing tendency to neglect abnormal growths until too far advanced for relief, and establish sound views on the necessity for early resort to thorough examination of all suspected cases in their incipient stage.

Certainly, if every reputable physician to whom these cases primarily come were intelligent on this subject, and would use early the influence he possesses, many of these patients would be spared the risk of delay and rescued from the dangers of quack treatment.

Notes and News.

The Bichloride of Gold Cure for the Alcohol Habit.—

The editor of the New York Medical Journal, in October 31st issue, says:

The position of Dr. Keely is simply contemptible, unless his "cure" is fraudulent and he knows it. If he really believes in it he is guilty of conduct so unprincipled—so utterly wanting in appreciation of the duty he owes to mankind—that it is hard to forgive. If he is a swindler, he is not contemptible, he is positively brilliant in his line. Whatever he is, it is a serious responsibility for any man to assume when he refuses to divulge the methods by which he professes to produce such important results. We are not aware that any particular difficulty in the production of "bichloride of gold" (whatever that may mean) or of the unknown but apparently necessary "other substance" is advanced in justification of the secrecy. Dr. Keely's partisans allege that at some unspecified period he distributed an unspecified number of "barrels" of his remedy among a number of physicians (names and precise number not given). This, if it is true, is no excuse for his present course. Though he had sent a "barrel" to every doctor in the country, unless the nature of its contents was known or its harmlessness guaranteed by the reputation of the sender, no honest physician could use it. This is equally the case at the present time.

In the meantime, the admirers of Dr. Keely should refrain from denouncing the "prejudice" of medical men. No opportunity has been afforded to submit his pretensions to judgment. The responsibility for this rests with the claimant. If his professions are just, he deliberately excludes from benefit probably a hundred thousand persons for every one now able to obtain treatment. Of course, the discoverer of a cure for drunkenness is worthy of any amount of pecuniary reward, but, if the statement that there are seven hundred people now under treatment by the doctor at $25 a week apiece is correct, the income of $17,500 a week must certainly soon place the recipient in circumstances of comparative ease.

Reminiscences of Ricord, the Syphilographer.—

Ricord, the syphilographer, an American by birth, seems to have led such a species of double existence as to have presented differing aspects to different persons. Dr. Oliver Wendell Holmes says that he was "the Voltaire of pelvic literature—a sceptic as to the morality of the race in general, who would have submitted Diana to treatment with his specifics and ordered a dose of blue pills for the vestal virgins." Judge Gayérre, of New Orleans, wrote in 1887 some reminiscences in which he said: "Ricord, at the time, was a bachelor, and I believe has never married. What was my astonishment, when I entered a very large bed-room, of which the walls, from the high ceilings to the floor, were covered with none but magnificent oil paintings, representing sacred subjects. At the head of the bed was a sculptured oak *prie dieu* on which there was a superbly illustrated copy of the Gospels lying open. There was a red velvet cushion to kneel on at the foot of the *prie dieu*, surmounted by a beautifully carved ivory Christ on a gilded cross. After a little while I was led to the presence of the medical philosopher, who habitually seemed to delight in being a cynical unbeliever. Guessing at what had passed in my mind, he said, with a laugh not unmixed, I thought, with some embarassment of manner, 'You are surprised, are you not?' 'Certainly,' I replied; 'who would not be? Faith! my first impression was that I had been introduced by mistake into the bed-chamber of the Archbishop of Paris.' 'Well! well! my friend,' he said, in a half jocose and half serious tone, 'I hear and see so many unclean things during the day that on retiring at night I like, before going to sleep, to refresh my eyes by looking round on holy objects.

The Difference Between Man and Woman.—

This perennially interesting subject has been scientifically treated by Dr. Harry Campbell, who points out, among other differences, the great recuperative power of women; they bear the loss of blood extremely well, and even the most sickly of them show an extraordinary power of fighting against exhausting diseases. Dr. Campbell says that he knows of few facts in biology more remarkable than this tenacity of life in women. Not in a few diseases merely is the mortality of the male sex greater that in women, but in almost all. The author's explanation of the fact is, that "men being more catabolic than women, and their nervous centres therefore more explosive, one would expect them to show the greater tendency to those disorders which are attended by an excessive expenditure of energy." The differences between the boy and girl in nervous organization are very marked. With the one exception of infantile hemiplegia, boys are more frequently affected than girls by idiocy, acute anterior poliomyelitis, pseudo-hypertrophic paralysis, meningitis, and epidemic cerebro-spinal meningitis. Girls are more frequently than boys affected by habit, spasm, and chorea. Suicide is much more common in boys than girls. If we are to regard—with Herbert Spencer—women as to some extent an undeveloped man, we should expect the woman to resemble the child more than the man does, and this, Dr. Campbell believes, is the case.

Apropos of this the Medical Record remarks that it long ago pointed out the significant fact that between man and woman there is a *vas deferens*.

Shakspere's Family as Patients.—

The Bristol Medico-Chirurgical Journal affords the following information concerning medical practice in Shakspere's time:

"Master John Hall, Phyfician," who was in practice at Stratford-on-Avon, married Shakspere's daughter, Susanna, in 1607. In Latin he wrote details of the illnesses of many of his private patients, whose names he gives in full in the clinical records which he published. Under the title of "Select Observations on English Bodies of Eminent Persons in Desperate Diseases," his book was translated by James Cook, of Warwick, author of the "Marrow of Chirurgery." The notes of many of Dr. Hall's cases are interesting, not only on account of the family association of the patients, but because they are additional instances of the diagnosis and treatment then current. Polypharmacy was

in fashion then, almost more than at the present time, although we have not to go very far now to find those who, like Dr. Hall and his contemporaries, seem to think that there exists a drug to be appropriated to each individual symptom. Although Dr. Hall's diagnosis is often open to criticism, his treatment was based on sound principles. Not seldom his success was obtained by the induction of copious vomiting, and nearly always by very free purgation.

Injustice to American Medical Authors.—

The editor of the Medical News discusses the question of the publication of contributions read at medical societies in other periodicals than the late-appearing transactions or society's journal. He thinks American medicine is plainly put at a disadvantage by the rules against such publication now enforced by many of our societies. It has become a matter of repeated remark that articles published only in the society transactions, from obvious reasons are not abstracted or re-reported by European journals. The wrong even proceeds to their frequent exclusion from the Index Medicus and from the various annuals, epitomes, or other serial *résumés* of medical literature published over the world. It is said that the actual circulation of some of the transactions, or authorized society reports, does not exceed fifty copies. Writers who have anything of importance to communicate to their professional brethren will scarcely submit longer to such an absurd restriction. The loss is a common one both to the author and to medicine generally, but to American medicine in particular.

Post-Graduate Study of Insanity.—

In a paper read before the Physiological Section at the Bournemouth meeting of the British Medical Association, Dr. Francis Walmsley called attention to "the desirableness of throwing open our asylums for the post-graduate study of insanity."

Dr. Walmsley has, we think, done well to bring up the subject again, and in referring to the many excellent and useful reasons why "the rich and valuable stores of information which our asylums contain should be rendered available to the whole body of the profession." He says that there is a general agreement that the time has come for urging asylum authorities to meet this want, and give the profession this opportunity for completing an important branch of their study. "Such a course must necessarily lead to an interchange of views between the profession at large and the permanent staffs of our asylums, which manifestly must result in benefit to both, in good to the patients, and in profit to the whole community."—*Lancet.*

A Contribution to the Literature of Maternal Impressions.—

In an interesting article on "Manners and Customs of Sicily in 1890," by Hamilton Aïdé, in the Nineteenth Century for October, 1890, a unique case is mentioned of the family of a dealer in antiquities in Palermo, in which six of the seven children were deaf-mutes. The affliction was on neither side hereditary, both the wife's family and that of the husband being a fine and perfectly sound race. The first child was without blemish; but before the birth of the second, which took place during the Revolution, a bomb-shell burst in the wife's room. The child was born deaf and dumb, and so were the five born subsequently. Four of these children are still living in the Deaf and Dumb Asylum in Palermo.

The International Congress at Rome.—

It is rumored a movement is on foot in St. Louis to charter a vessel and take over a party of medical men who wish to go to the Roman Congress. The vessel is to have a capacity of four hundred passengers, and the trip will last six weeks. Several places in the Mediterranean will be visited. Dr. N. Senn, of Chicago, is president of the association which is undertaking this project.

Meeting of the Southern Surgical and Gynæcological Association.—

This Association holds its fourth annual meeting Nov. 10th, 11th, and 12th, at Richmond, Va. Members of the medical profession are cordially invited to attend.

Therapeutic Brevities.

Abortion and Treatment of Bubo.—Joseph Adolphus, M.D., suggests the following: "A coming bubo may be aborted by injecting three or four drops of pure carbolic acid, diluted with twice as much glycerin and half as much water, into the centre of the tumor. Plunge the cannula deep into the centre of the swelling, and inject slowly. If the tumor is large and the area of outlying œdema considerable, the injection should be made in three places. After injection, give the tumor a coating of flexible collodion; the collodion contracts and causes pressure on the tumor, which helps promote absorption. Nine out of ten cases of bubo will be found to belong to the chancroidal class. Often the specific bubo remains unbroken for months, and then bursts. It is always a hard, solid body, well defined in outline, a point in differentiation from the simple kinds. The latter are amenable to the carbolic acid treatment, but the specific is sullen and defiant, slow, remains hard, seldom softens. The simple kind often make ugly sores which are hard to heal. I have found iodoform, boric acid, and balsam Peru the best local treatment, equal parts of each being used and the cavity being filled with the mixture. When the healing is slow I treat the sore with a solution of nitrate of silver, 60 grains to the fluid-ounce of water, a few drops of pure nitric acid, and 10 to 21 grains of nitrate of soda added. Apply with a swab. This will frequently stimulate rapid granulations and cicatrization. I give such patients 3 grains of quinine, 5 drops of fluid hydrastis (non-alcoholic), and $\frac{1}{30}$ grain of strychnine, three times a day. A good local application to these sores is the pure non-alcoholic fluid hydrastis, two or three times a day. I prize it highly, and, with iodoform, want nothing better—in fact, cannot get anything superior.

Treatment of Old Ulcers of Leg.—Dr. Charles P. Elwert, of New York, writes the Medical Record: "I have treated in the past six months, at Demilt, Bellevue, and Vanderbilt Dispensaries, and also in my private practice, forty-six cases of varicose and other ulcers of the leg, and have obtained favorable results in thirty-four cases, by the following method: Cleanse the ulcer by irrigating with a solution of corrosive sublimate, 1 to 5,000. Then dry thoroughly with absorbent cotton, and apply daily the following powder:

℞ Iodoform, ʒ ss.
Sulphate of cinchonidia, ʒ j.
Wood charcoal, ʒ ijss.

If any discharge appears after applying the powder, use absorbent cotton before applying the powder again. Advise the patient to rest and to keep the leg elevated. Keep the bowels regular with a mild laxative, and give some stimulating tonic to improve the condition of the general system. In the case of four patients the powder caused irritation, and the discharge was increased. On further examination of those patients I discovered the existence of Bright's disease. In six other cases, where the above treatment was not successful, a poultice composed of powdered wood-charcoal and matricaria was used for three or four days, until I obtained a healthy appearing surface to the ulcer; and I then applied daily the following solution:

℞ Tr. calendulæ, ʒ ij.
Aquæ camphoræ, ʒ viij.

After applying the solution, I strapped the ulcer with adhesive plaster, with good results in four of the above six cases, and gave laxatives and a tonic. As the treatment of chronic ulcers at the present day is not very successful in a large percentage of cases, especially in dispensary practice, the above treatment may be of use to the profession."

Suggestions for Undertaking Cerebral Operations.—Surgeon Keen, of Philadelphia, in Times and Register says:

A very important thing in cerebral surgery is always to have ready hot solutions, as the patients often show signs of collapse, in which event a douche of hot water, or bichloride, or carbolic acid solution, or any hot antiseptic or aseptic solution applied constantly to the head, is the best means for restoration.

I furnish myself with a salve consisting of wax, carbolic acid, and other ingredients, for the purpose of puttying up the bones of the skull, in cases of serious hæmorrhages which may occur in cerebral operations from the vessels between the tables of the skull. I use it for hæmorrhage from a small vessel; if large, I would not hesitate to drive in a bit of antiseptic match-stick, or catgut, or, better still, to crush the bone.

Whenever you open the skull, always open the dura mater. This is not a rule without exceptions, but almost so. When you have gone so far as to cut down to the dura, open

it and look at the brain, as you may learn that which will require you to go on. You may learn that, which if you miss, you miss the whole pith of the operation. If I find nothing, I sew up the dura again.

Eucalyptus in Catarrh of the Respiratory Tract and Obstinate Cough in Children.—In acute cases, my usual custom is to administer it in connection with ammonium salts; in subacute cases a little paregoric may be advantageously added. In the obstinate irritative coughs following inflammatory affections which have apparently subsided, the fluid extract of eucalyptus is best given without other drug, in syrups of tolu and acacia, or in an emulsion of oil. The dose is about five drops, for a child of two years. The following are specimen formulæ:

℞ Ammonium carbonate, gr. viii–xvi.
Ammonium chloride, gr. xxii–xlviii.
Fluid extract of eucalyptus, f ʒ iss.
Syrup of acacia, } āā ʒ ss.
Syrup of tolu, }
Water, ad f ℥ ii.

M. Sig.—For a child two years of age with acute bronchial or laryngo-tracheal catarrh, one fluid drachm in milk or water every two, three or four hours.

℞ Aromatic spt. of ammonia, } āā ʒ ii.
Camph. tinct. of opium, }
Fluid extract of eucalyptus, f ʒ iss.
Syrup of acacia, } āā f ℥ ss.
Syrup of wild cherry, }
Water, ad f ℥ ii.

M. Sig.—For a child with a subacute bronchial catarrh, one fluid drachm in water every two, three or four hours.

—S. Solis-Cohen, in *Med. News.*

Treatment of Gonorrhœal Rheumatism.—Meigs, in Philadelphia Times and Register, says:

In these inflammations (gonorrhœal rheumatism) it would seem to me that the inflammation is of the joint surface itself, more than of the tissues around the joint, and that is why we have such intense pain. The prognosis is generally good, except for the danger of some permanent injury to the joints.

Although for my own part, I do not see that salicylic acid or its derivatives are of much value in these cases, yet I almost always try them, and do not feel that I have done my best for a severe case until I have given pure salicylic acid. I have seen cases where 3 j doses of salicylate of soda had no effect, and on substituting 3 j doses of salicylic acid have entirely relieved the pain. You should begin with the salicylates, and then give salicylic acid, and if, after three or four days, you get no result, use iodide of potash gr. v-x three times a day, and other remedies as they are indicated.

Comedones.—Unna has devised a preparation which he claims will not only cause the apparent disappearance of the comedones, but will also exercise sufficient tonic action to diminish and finally abolish the tendency to their formation. The formula in question is as follows:

℞ Wool fat, 10.
Vaselin, 20.
Hydrogen, peroxide, 20–40.
M.

This mixture is to be applied to the affected parts and allowed to remain. This can be easily done if the application is made at night. If it can also be applied during the the daytime a further advantageous action is secured.

On a New Treatment of Granular Conjunctivitis.—Abadée claims that, in the most remote recesses of the conjunctival sac, inaccessible to the ordinary simple operation of eversion, the real infectious focus of granular conjunctivitis resides. Ordinary treatment does not touch this.

He accomplishes complete eversion by a specially constructed instrument, performing the operation under a general anæsthetic, as it is extremely painful.

The palpebral conjunctiva thus entirely exposed, he thoroughly scarifies. Then with a tooth brush he energetically rubs both ways the bleeding surface with a 1:500 sublimate solution. Afterwards he daily douches the everted mucous membrane with a 1:500 sublimate solution.—*La France Méd.*

Topical Application in Diphtheria.—Ernst Zimmermann, M. D., writing the Medical News says: Having used with signal success the following formula as a topical application to the throat in the treatment of malignant diphtheria, I make this report so that a thorough test of it may be made:

℞ Acid. sulphurosi, f ℥ ss.
Liquor potassæ, gtt. xl.
Aquæ calcis, ad f ℥ iv.

Mix; filter; keep well corked, in a cool place. To be applied topically to the throat by means of a sponge, probably every hour to two.

A Snuff for Acute Coryza.—Tissier recommends the use of the following snuff for the relief of a cold in the head:

℞ Menthol, gr. vj.
Powdered boracic acid, ʒ ij.
Subnitrate of bismuth,
Powdered benzoin, ää ʒ iij.

A good sized pinch of this may be snuffed up five or six times a day. If desired, one grain of morphine and half a drachm of calomel may be added to the mixture, the addition apparently increasing its efficacy in certain cases.

Carbolic Acid in Rheumatism.—Dr. J. L. Hancock writes in the North American Practitioner for September, 1891, upon the good effects of carbolic acid locally applied in the treatment of acute articular rheumatism. He uses it in the form of a four-per-cent. solution applied warm on a piece of flannel wrung out and enveloping the joint. This application is made at night, and allowed to remain until morning. It has given good results in the writer's hands.

Vomiting of Pregnancy.—Ohlfeld and Kaltenbuch contend, in the Centralblatt für Gynækologie, that hyperemesis gravidorum is often of a hysterical nature. These writers have had unusual success with treatment based on this assumption. The patients were isolated from their families, kept under strict surveillance, and nervine sedatives administered, chiefly the bromides, in the form of enemata. To the bromides a writer in the New York Medical Journal suggests the addition of chloral.

Inflammation of the Prostate.—The following is recommended by a French writer as very efficacious in the relief of chronic prostitis:

℞ Iodoform, gr. xx.
Olive-oil, ʒ ij.
Cacao butter, q. s.

Divide into twenty suppositories, one to be inserted at bedtime.

Hypodermatic Injections of the Juice of the Thyroid Gland have been found to act as a diuretic in myxœdema by Dr. Fenwick, and Dr. Murray has found that they modify the symptoms of that disease.—*Med. Record.*

To Arrest the Secretion of Milk.—The external application of one part of camphor in six parts of oil of turpentine is often of great service.—*Medical Record.*

Medical Progress.

Treatment of Alopecia. — Prince A. Morrow, M. D., in Journal of Cutaneous and Genito-Urinary Diseases, October, 1891, concludes his paper on this subject by a detailed consideration of the treatment. His views are:

General Treatment.—The importance of general or constitutional treatment is differently appreciated by different authorities. Many advocates of the parasitic theory condemn constitutional treatment as useless and unnecessary. Whatever may be the microorganism of alopecia areata, or the peculiarity of its pathogenic mode, the pathological result is an impairment of the nutrition of the affected areas. The clinical phenomena—the smooth, pale, patches, the anæmic skin, the collapsed hair follicles, and the arrest or suspension of their function—all point to the participation of the nervous system in their production. While neither food or medicine exercise, so far as we can determine, any direct specific influence upon the nutrition and growth of the hair, yet we know that local nutritive processes are favorably influenced by hygienic and therapeutic measures which invigorate the general health and improve the general nutrition of the system. Especially in cases where the disease is generalized and protracted, the effect of local treatment may be materially aided and energized by the exhibition of tonics and reconstituent remedies. In such cases local measures should be supplemented by ferruginous, nutritive, or nerve tonics, such as iron, quinine, cod-liver oil, phosphorus, strychnia, etc. In all cases where there is evidence of loss of nerve tone I am accustomed to give the phosphide of zinc and strychnia, a combination of phosphorus, iron, and strychnia, or phosphoric acid with strychnia.

While alopecia areata is often associated with evidences of impaired health, nervous debility, and a variety of constitutional disorders, it must be admitted that a large proportion of cases are apparently in good general health. It would seem hardly necessary to subject strong, robust individuals, in whom no signs of antecedent or existing disorder can be detected, to a methodic general treatment.

The judicial rule of conduct is to base the treatment upon the indications furnished by a study of each individual case. If there is evidence of constitutional derangement, it should be corrected by appropriate means. If the patient's general health is good, con-

stitutional treatment is of subordinate importance.

Local Treatment.—Among authorities there is general unanimity of opinion as to the essential principle involved in the local treatment of alopecia areata; it may be summed up in a single word, *stimulation*. Variations in treatment depend upon the choice of the numerous agents recommended for this purpose and the methods of application.

The general rule may be formulated that any agent capable of determining an irritation varying in intensity from rubefaction to superficial vesiculation, may be indifferently employed. The degree of such irritation is a matter of importance. Substances, such as croton oil, capable of causing a deep-seated dermatitis, should be avoided, as there may result permanent loss of the hair from pustular inflammation of the follicular structures. That stimulating agents should be essentially parasiticidic is not deemed essential even by the adherents of the parasitic theory. Besnier, who may be regarded as one of the most prominent partisans of of this theory, systematically excludes from his practice all agents which may be properly classed as parasiticides.

Coming now to the plan of treatment which has given the best results in my hands, I may say that it is subject to modifications in detail depending upon the extent of the disease, the rapidity of its progress, and other clinical features.

In the simpler, more benign cases, where the patches are limited in number and circumscribed in extent, the hair around the margin of each patch is ordered to be closely clipped. This permits of a more thorough inspection of the diseased area and facilitates the application of remedies. As the disease always advances by peripheral extension, the hairs in this "zone of protection," as it has been termed by Besnier, are subject to modified form of epilation. The hair should be grasped lightly by the forceps, and if it readily yields it should be extracted. If it resists moderate traction, the grasp of the forceps should be relaxed and the hair allowed to remain. The tentative traction is an excellent test for the detection of diseased hairs, and should be frequently resorted to during the course of treatment.

In recent cases, where the parasite has presumably not penetrated sufficiently deep to escape its action, I am accustomed to employ chrysarobin, with or without the addition of salicylic acid, in the form of an ointment, to insure more thorough penetration. The strength of the preparation is, chrysarobin eight to ten per cent., salicylic acid two to five per cent., in lard.

This should be applied every three or four days in sufficient strength to excite and maintain a moderate dermatitis. In some cases I have found this treatment alone sufficient to effect a cure. Formerly I was in the habit of blistering the surface with acetum cantharidis or other vesicant, but I have not found this severer treatment more efficient than the chrysarobin applications.

In cases where the disease is severe and more extensive, covering the greater part of the scalp, the hair should be closely cut or shaven and the entire surface treated with acetic acid mixed with chloroform or ether. I usually employ a mixture of equal parts, the relative proportion of the acetic acid being graduated to suit the reactive peculiarities of the tissues, which vary in different individuals, and even in the same individual, at different stages of the disease. Ordinarily a strength sufficient to produce the white nitrate of silver tint is employed. This superficial vesiculation thus occasioned is followed by a slight exfoliation of the epidermis.

Instead of this mixture of acetic acid and chloroform, which has the advantage of being readily prepared, the strength being increased or reduced by varying the proportions, the following formula, recommended by Besnier, may be used:

℞ Hydrate of chloral, 5. grammes.
Official ether, 25. grammes.
Acetic acid (crystals), 1. to 5. grammes.
M.

These applications are repeated two or three times a week at first, and continued at longer intervals during the entire course of treatment.

In the intervals between these applications, which should be made by the physician and not intrusted to the patient, I direct the use of a stimulating oil to be applied once a day as follows: Oil of eucalyptus, oil of turpentine, each half an ounce; crude petroleum, once ounce; alcohol, one ounce. The application of this oil is to be followed by a thorough massage of the scalp for five minutes, which the patient can be instructed to perform. This massage insures the penetration of the oil and constitutes of itself a most effective stimulus to the scalp. Once a week or oftener the head should be thoroughly washed with tincture of green soap.

At a later stage of the disease I frequently order the use of this oil to be replaced by a sulphur ointment—or sulphur in combination with resorcin. I have also used daily douches and frictions with salt water, which I am in-

clined to believe favorably influence the growth of the hair.

In alopecia affecting the hairy structures of the face I also employ the acetic acid, but the strength of the preparation must be modified to adapt it to this more sensitive surface. An objection to its use in this region is that the rubefaction persists for some time, and the resulting epidermic exfoliation is objectionable on cosmetic grounds. On this account I more frequently order daily frictions with tincture cantharides or tincture of capsicum in an equal quantity of glycerin.

For alopecia of the body, the extensive surface contra-indicates the use of active irritants, and milder means are fortunately sufficient. The use of mercurial and tar soaps, and the employment of sulphur baths, are the only means necessary.

Such, briefly in outline, is the method of treatment which I have for some time employed with invariably satisfactory results. In estimating its value I am aware that in alopecia areata it is difficult to differentiate between the effects of treatment and the self-limitation of the disease. The acetic acid I was led to employ from the observation of its effects in the Sinai Hospital and the claim, which I believe to be substantiated, that it has a marked pilotrophic influence, and that more than any other agent it increases the pigmentation of the hair. Crude petroleum I employ in all these cases, either in the above combination or with equal parts of brandy, gin, or alcohol, from a conviction derived from my observation of its use in other forms of alcopecia that it is a most admirable stimulant to the pilary system and promotes the growth of the hair.

In addition to these remedies I have used a variety of other agents. Jaborandi I have employed in the form of an ointment, and pilocarpine subcutaneously, without result so far as I could determine. Electricity I have experimented with extensively, without being able to persuade myself that it influenced favorably the alopecic process.

Cannabis Indica as an Anodyne and Hypnotic.—Dr. J. B. Mattison, in a letter to the New York Medical Journal, Oct. 11th, 1891, states:

Your recent editorial anent Cannabis Indica, prompts me, from an experience special, unique, and, to some extent, unequalled, to confirm the opinion of Dr. Suckling as to its value as an anodyne and hypnotic. In a note lately received by the Doctor, he said: "I have used Indian hemp as a hypnotic and also as an anodyne. I find it most useful in both ways." In a paper, "Cannabis Indica as an Anodyne and Hypnotic," read by the writer at the last meeting of the Medical Society of the County of Kings, attention was called to this topic in detail. I quite agree with Dr. Suckling that hemp deserves a better repute than it now has with most physicians. Three causes, in my opinion, have led to its present disuse. First, a fear of its toxic effect. This is groundless. Hemp is not a poison. There is no death on record. Wood says: "Even the largest doses do not compromise life." Peculiar effects sometimes seen—often peculiar to the *patient*—may alarm a novice, but alarming symptoms are not always dangerous symptoms, and, quoting again from Wood, "Hemp is not a dangerous drug." I have known a half ounce of the fluid extract taken at once, with no effect other than relief of pain and a desire to sing. My experience, compassing more than a decade, many cases, and hundreds of doses ranging from twenty to sixty minims of the fluid extract, has never brought any anxiety along toxic lines. A second cause of limited use is feeble or inert products, and I fancy this has been the largest factor. Hemp is notoriously uncertain, but—once a good specimen—it is often of great value. It should never be called worthless till a *full* trial with a *good* extract proves it. A recent experience notably shows the lack of some extracts. Pills prepared by two reputable firms were given to a female morphine-eater as an anodyne, in increasing amount—beginning with a half grain—till it reached *ten grain* at *one dose*, with no result other than an easier, drowsy feeling, and within the last two hours I gave this patient *twelve* grains at once, with only a slightly increased effect. Of course, some of this lack of effect was due to the peculiar tolerance of other nervines shown by opium, chloral, and cocaine devotees, as years ago I noted, but the major part may be safely set down to a poor product. Squibb's fluid extract and Parke, Davis & Co.'s normal liquid have served me well.

A third is too timid dosing—with failure and consequent disuse. I am convinced that the dose of the books is often too small. For instance, Wood, in his latest edition, advises one minim of the fluid extract at a dose! Surely few morbid conditions, save in very impressible subjects, would give way to such dosing. The only true plan is: A good extract and then push it to full effect.

My doses have been large, as stated, to men and women alike. They are *over-large* and unneeded for the *non*-narcotic case, but

they prove hemp harmless; and the opinion of most neurologists is that, once a drug of this kind is demanded, it is better to give one large dose than several small.

Were the use of Indian hemp limited to migraine, in which there is a consensus of opinion as to its value, its worth, direct and indirect, would be greater than most imagine. It is not only calmative, but curative. It will often promptly end an attack, and, if continued in semi-daily doses for weeks or months, it will in many cases, especially in the young, blot out this neurotic taint. This is its direct effect for good. Indirectly it would save many a patient from the sorrow and pain of an opium bondage. Hemp has not a baneful effect like the poppy. A medical man I know took it in full anodyne effective doses each day for two years, and quit it without trouble. Such a record, it is safe to say, could not have been made with opium.

Dr. Suckling wrote me: "The young men rarely prescribe it." To them I specially commend it, for they are too often prone to forget remote results of incautious opiate giving, and so "rush in" where their elders —warned, it may be, by a hapless experience —dare not "tread." Better by far a less brilliant—only because less speedy—result from hemp than to imperil a future, it may be for life, by that modern mischief-maker, hypodermatic morphine.

One whose professional life is brought in daily contact—as for years mine has been—with those whose lives have been blighted by the poppy, can and should speak feelingly and forcibly on this subject, for it compasses more sorrow of mind and body than the world will ever know.

To Remove Superfluous Hair.—Dr. Frank Van Allen, of Madura, India, writes: "By means of the following method I have cured two fairly severe cases of hirsuties of the upper lip:

℞ Powdered air-slaked lime, ʒ j.
Orpiment (arsenic trisulphide,—As_2S_3) gr. ij.

Add water enough to form a paste, and mix. Apply to the hair surface about a quarter of an inch thick. Allow the paste to remain for fifteen or twenty minutes, when it will be dry. Remove; and the surface which before was hairy will be as smooth as the palm of one's hand, the hair coming off with the paste. The skin may or may not be slightly reddened, but this redness will pass away within an hour or so. After a few days the eaten-off ends of the hairs will be seen on careful examination, but a second application of the paste will as before destroy the hair. These applications will have to be made about twice a week at first, then once a week, then once a month, etc. The hair grows out at first very much as if it had been merely shaved off; later, on careful examination, each individual hair is found to be thinner than before, growing less strongly, the hair, if black, losing its color, and, in a word, yielding to the continual irritation of the paste. This treatment requires a year or a year and a half to effect an entire cure, but it possesses the advantage that immediately after the first application the patient is, as far as all outward looks go, completely relieved of her deformity. The most practicable way to direct the patient in the preparation of the paste is to tell her first to provide herself with a small mortar and pestle. Put into the mortar as much of the lime powder as can be held on the end of a spatula or table-knife. Add a few drops of water and mix to a paste. Then with the moistened end of the pestle dip lightly into the powdered orpiment, so that about as much orpiment as would altogether equal a pea in amount clings to the pestle. Mix this with the lime. Do not use too much orpiment. Apply at once. All samples of orpiment do not work well, and on becoming acquainted with this method, some three years ago, I tried five or six samples before I finally procured one that gave good results."—*Medical Record.*

Surgical Treatment of Pulmonary Cavities.—At the recent Congress of Tuberculosis, M. Poirier (Sem. Méd., August 1st, 1891) read a paper on the surgical treatment of pulmonary cavities. He said the first case on record was accidental. In a duel fought in 1679, the sword of one of the combatants passed through his antagonist's lung and opened a pulmonary cavity. The surgeon utilized the wound for the direct treatment of the cavity and the patient recovered. In conjunction with M. Jonnesco, M. Poirier has collected all the available statistics, of which the following is a summary:—Of 29 cases of incision of tuberculous cavities with resection of ribs, improvement took place in 15, cure resulted in 4 (these cases must, according to M. Poirier, be taken "with every possible reserve"), in 9 the result was negative, in 1 it was unknown. In 19 of the cases the disease was situated in the apex. M. Poirier, still with the co-operation of M. Jonnesco, has endeavored to simplify the method of operation so as to minimize the

amount of traumatism. The following, according to them, is the best way of reaching the upper part of the lung. An incision is made with the thermo-cautery 4 centimetres below the sterno-costal notch from the middle line of the sternum outwards for 9 centimetres in a direction parallel to the first intercostal space; in this way the pectoralis major, which is usually much thinned, is reached, and by enlarging one of the spaces between the fasciculi, the plane of the intercostal muscles is reached. This is divided and the pleura exposed. If there are no adhesions it is better to establish them before proceeding further, but if there is a cavity adhesions are always present. It is easy to "strike" the cavity through these adhesions, though a certain thickness of pulmonary tissue has often to be traversed for the purpose. As cavities are generally situated quite in the upper part of the lung, the first intercostal space is at a distinctly lower level than the cavity; the point of the instrument must therefore be carried from below upwards and from before backwards. When the cavity lies towards the back, the spinous process of the seventh cervical vertebra should be sought for; an incision is made outwards from this point towards the scapula; the trapezius and rhomboideus are divided, and the first intercostal space, which is much less wide than it is in front, is reached. Resection of rib may be necessary, but M. Poirier does not advise this. From experiments made on twenty dead bodies, he holds that in front resection of ribs in never called for.

Some New Studies in the Therapeutics of Typhoid Fever.—An interesting and novel study of the therapeutics of typhoid fever has been made by Drs. G. Rocque and E. Weill, of Lyons, France (Revue de Médecine, September, 1891), and by Professor Teissier of the same city.

The object of their investigation was to determine the effect of treatment on the elimination of toxic substances by the urine; the method consisting in determining the "coëfficient of toxicity" of the urine in typhoid fever when the cases were not treated at all, and when treated by cold baths, or analgesin, or naphthol. This toxic coëfficient is obtained in the following way: The total urine of twenty-four hours is measured and filtered; enough of this is injected into the auricular vein of a rabbit to produce the death of that animal. The urotoxic coëfficient is represented by a fraction, of which the numerator is the weight of the animal, and the denominator the amount of urine necessary to kill it. The figure used for the denominator, however, is the amount of urine secreted per kilogramme of the patient's weight. The normal coëfficient is about 0.363 kilogramme.

In typhoid fever this coëfficient is always much increased, owing to the greater excretion of toxic products. This increase averages about .700, or double the normal. It is lowest at the beginning of the fever, and steadily increases (.560 to .800); it is quite independent of the fever itself, and also of increased secretion of urine. It lasts after the fever subsides, and continues throughout convalescence, or even longer.

In Lyons two methods of treatment prevail—that by baths (the method of Brand and Glénard), and that by analgesin according to the method of M. Clément, viz., the administration of 7 to 15 grains of analgesin every three hours. The statistics of M. Clément are said to be *très belles*, and they have evidently weaned some of the Lyons physicians away from their baths.

The danger in typhoid fever, it is admitted, is not the fever; but it is, according to the French view, the toxic substances which accumulate in the blood. This danger from toxæmia can be combated in two ways, either by increasing the amount and rapidity of the elimination of the toxines, or by lessening their production. Four cases were submitted to the bath treatment, and their urotoxic coëfficient carefully taken. The amount of liquid drank was also measured.

The observations showed that under the baths the urinary toxicity increased steadily and enormously, so that the coëfficient is increased to five or six times the normal. At about the tenth day it remains stationary, and in a few days begins to descend, so that by the time the fever ceases the toxicity of the urine is at the normal. The cold bath, then, does not lessen the production of toxines, but it is a powerful stimulant to their excretion.

Two cases were treated by analgesin. In these it was found that under this drug the urinary toxicity promptly fell below normal, and continued so while the analgesin was given. The coëfficient sometimes fell below .200. However, as soon as the convalescence began, and the analgesin was suspended, the toxicity promptly rose to three or four times the normal, and so continued for a considerable time. Thus it appears that analgesin does not lessen the production of toxines, but simply prevents their elimination.

Professor Teissier's observations, made in a similar manner with naphthol, showed that

it lowered the elimination of toxines both during the fever and during convalescence, hence it had really a specific action in lessening the production of poisons.

If any general induction can be made from these striking but somewhat limited series of experiments, it would be that a combination of naphthol and cold baths would be the ideal treatment for typhoid from an antitoxic point of view; for the one agent would lessen the production of toxines, while the other would promote the elimination of those which were manufactured. The observations here quoted also tend to discredit the "bibulous" method of treatment which is advocated so strenuously by Lichtheim of Königsberg, and which has been adopted somewhat in this city. Dr. Valentini, the assistant at Lichtheim's clinic, gives typhoid patients two litres of milk, one litre of bouillon, and as much water as can be absorbed without producing disgust and repulsion. He also gives two hundred grammes of sugar of milk, dissolved in water, partly for its nutritive, partly for its diuretic, action. Rectal injections of water are also given.—*Medical Record.*

A Plea for the more General Use of Alkaloids.—The advantages I claim for alkaloids over galenical medications are:

Greater uniformity and reliability of preparations.

Increased accuracy of doses.

The avoidance of incompatibility in prescriptions.

A more distinct and limited effect of medicines; for in giving alkaloids we get only the action of the one agent, and not the effect of from one to half a dozen other ingredients as with galenical preparations.

A greatly improved method in the administration of remedies to the patient. Drops and spoonsful are the usual measures for ordinary preparations; drops vary in number from 44 to 250 to the fluid drachm, and the size of the spoons vary more than 100 per cent., to say nothing of the deficient filling and overflowing of spoons and the spilling of medicines in administration.

A more concise method of treatment of disease. The prescriber must have a clear idea of what he wishes to accomplish. The action of each alkaloid is definite, and the indications are plain. "Shot-gun" prescriptions with alkaloids are out of the question. The "hit or miss" plan, in which the right thing is usually missed and the wrong thing hit, will not do.

If I have settled beyond a doubt that alkaloids are superior in *action* to the galenical preparations, then I pass to the last advantage I claim for them—this is:

Pleasant form for administration. I do not advocate the use of active principles, neither alkaloids nor glucosides, to the exclusion of other preparations. We may desire the effect of the crude drug, and not the alkaloid alone; for instance, opium may be indicated, and not morphine. When crude preparations are advisable, the "normal liquids" of Parke, Davis & Co. are strongly recommended. They are manufactured so that a certain quantity of the normal liquid represents a definite *strength* of active principles, and are assayed to this standard, regardless of the amount of crude drug necessary, and it is readily seen how much more reliable these liquids are than the Pharmacopœial preparations.—V. H. Hulen, M. D., in *Daniel's Texas Med. Jour.*

Causes of the Inefficiency of Ointments.—The inefficiency of ointments which have been highly recommended is one of the perplexities which occasionally arises and which can be easily accounted for if but a little observation be used at the proper time. The inefficiency is most apparent in connection with ointments employed upon the face. The supposed failure of remedies in such cases is due to the ignorance of the patient or carelessness of the physician. As a rule, ointments which are to be applied to the face are ordered to be used at night, just before bedtime. The patient faithfully applies the preparation and the anticipated result is not realized. Or, what may appear strange is that one side of the face improves readily whereas the other seems to remain *in statu quo*. The reason of this is self-evident. The patient lies upon one side and the application which has been made is rubbed off on the pillow. If the subject be restless in sleep the same thing will occur on the other side, and, as a result, an application designed to be fixed is entirely rubbed off. It is for this reason that I always advise patients who apply dressings to the face or hands at night, to wear a light cap or gloves. By this means the applications are retained upon those portions of the integument where they are placed and satisfactory results are obtained where formerly disappointment was experienced. So far as ointments to the face are concerned the mask is frequently indicated, and for this purpose the best form is that made of Canton flannel, placing the hairy side next to the skin. Such a mask is easily kept in position by means of tapes or of elastic whose tension is not too strong.—Dr. A. H. Ohmann-Dumesnil, in *Clinique.*

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Original Articles.

TREPHINING FOR TRAUMATIC EPILEPSY.

BY CHARLES H. MERZ, A. M., M. D.

The subject of this sketch, Joseph M—, is a young man of eighteen years. He first came under my care in May of 1890, when I treated him for a severe injury of the right eye—caused by a tine of a pitchfork passing through the eyeball. The injury and subsequent treatment were reported in the Journal of Ophthalmology, for September of that year, under the title, "Extensive Laceration of the Eyeball with Recovery."

When eight years of age, this boy was kicked on the back of the head by a horse. The injury was received near the vertex on the left side, at a point to be subsequently more accurately located. At the time, he became unconscious from the blow, and lay in a comatose condition for ten days. Unfortunately, his particular symptoms at that time cannot now be given. His parents state that upon emerging gradually from his stupor, he could not make use of any words, and finally, when he did, he stuttered badly and used the wrong words. There was some facial and bronchial paralysis. The wound discharged pus copiously for some four weeks, and then healed up. The physicians in attendance were divided in their opinions. One recommended trephining, and two opposed it, so that he was allowed to recover with a depressed fracture of the skull.

As he grew older, it was noticed that the boy, who had been unusually bright before his injury, was becoming dull and apathetic. He was inclined to sleep a great deal, and frequently dozed while in conversation with playmates. He was given to frequent and violent outbursts of temper, something unusual for him. His memory, too, became poor. In fact, his entire disposition seems to have undergone a change. About a year ago, while at work, he suddenly fell unconscious, and lay in that condition for eight or ten minutes. His face became livid, and his "arms and legs twitched violently and convulsively." He frothed at the mouth. Of this attack he had no warning. However, his epileptic seizures, for such they were, became more and more frequent, and he had distinct "aura." His last seizure was three weeks before he came to me for counsel. He suffered a great deal from mental and physical distress, and had become despondent. No history of any past or present nervous trouble could be elicited on either side of the family. I examined him carefully and found a distinct depression in the skull, about 2½ inches long and ¾ of an inch wide, near the superior angle of the parietal bone. Learning the history as here given, I recommended trephining and removal of the depressed bone. He consented without any hesitation, and was at once sent to the Good Samaritan Hospital, in this city. After a few days of preliminary treatment, I performed the operation, in the presence of Dr. Love, of Bloomingville, and Dr. Storey, of Castalia, the latter administering the anæsthetic, chloroform.

The day before the operation, the head was shaved, and thoroughly washed and scrubbed with bichloride solution just before operating. Upon making the incision to form the flap, copious hæmorrhage ensued. This had to be checked by pressure forceps and ligature, before proceeding. Over the depression, the scalp had become adherent to the bone and had to be dissected off. As soon as the flap was raised, a sharp furrow was seen in the skull, evidently the old line of fracture—extending at one point, as was afterwards seen, entirely through the skull. The periosteum was broken down and soft over the fracture and could be only partially removed from the bone. A one-inch trephine was applied at the posterior margin of the depression, and a disk of bone removed. The inner surface of the disk showed a ridge

corresponding to the line of the old fracture. The disk was adherent and had to be dissected from the dura mater. Cerebral pulsasation was normal. The dura was thickened and dark in color. A sharp spicula of bone was found projecting into the dura. A second button was removed about ¾ of an inch anterior to the first, and was also found to be adherent. The intervening piece was removed by means of the saw and rougéur forceps. The edges of bone were smoothed and all projecting points rounded, with the bone forceps. Hæmorrhage from the dura and the bone was quite free. A small drain-tube was inserted, the flap replaced and stitched with cat-gut, and the wound was dressed with iodoform. The operation consumed about an hour and a half. The patient bore the chloroform well, and recovered from it without any nausea or other ill effects. The dressing was not changed until the fourth day, when the wound was found perfectly united, except at the point where the tube emerged.

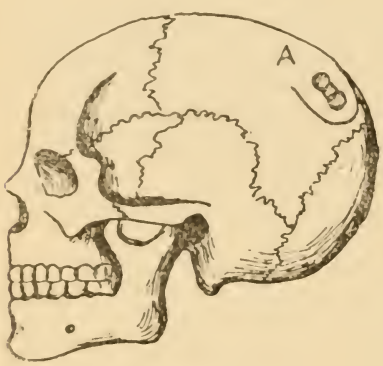

Fig. 1.

There had been slight oozing of serum, but no pus had formed. The tube was removed and the dressing changed. At no time was there any acceleration of pulse or rise of temperature. On the seventh day the patient was allowed to dress and walk about the wards, and a week later was discharged as cured. At this date, eight weeks after the operation, he has had no pain nor any symptom of an epileptic seizure.

The depression was located, as shown in Fig. 1, at the upper and posterior margin of the left parietal bone, just below the foramen. The extent of the depression, and the outline of the pieces of bone removed, are shown in Fig. 2, where the scalp is shown reflected from the skull.

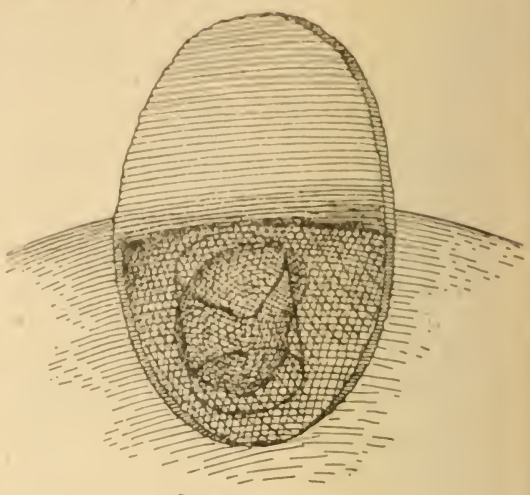

Fig. 2.

The writer regrets his inability to present many symptoms which would have made the case of more practical importance to those interested in brain surgery, but he believes that as a case of trephining for epilepsy it is complete.

This region lesion belonging to the most common and easily determined—the Rolandic zone or motor area—presented as its leading symptom Jacksonian epilepsy. While the presence of a mere irritable lesion did not necessarily imply an organic change, it was inferred that in this case adhesive and inflammatory changes, if not more serious ones, had taken place. The writer believes, from this and three former cases of a similar nature upon which he has operated successfully, that there can be but little question as to the advisability of trephining in primary cranial injuries presenting symptoms of compression, paralysis, or convulsion, for the removal of depressed bone—spiculæ or hæmorrhagic extravasations. This opinion is still more strengthened when it is remembered that without operative interference these cases will invariably become epileptic or insane, even after many years have elapsed. While the mortality even under antisepsis appears high (63.3 per cent.), spontaneous cures are unknown, and death must eventually ensue. It is very doubtful if the cures

of traumatic epilepsy are as great as statistics would lead us to believe, as by means of simple trephining without opening the dura they are placed at 14.6 per cent.

The more conservative opinion seems to be that in regard to trephining for traumatic epilepsy there should be clear evidence of a local injury—as a cicatrix or a depression—in addition to some symptom of localized irritations of the cortex, to call for operative interference; that success is better insured by removing all of the cicatricial tissue and irritable portion of the brain cortex, as well as the bone; that the operation should be performed before the "epileptic habit has become established;" and finally, that it should be made as thorough as is consistent with the patient's safety and with careful observance of antiseptic precautions.

Sandusky, Ohio.

ARTIFICIAL ANUS VS. ANASTOMOSIS.*

BY BENJAMIN T. SHIMWELL, M. D.†

This paper is written to advocate the performance of artificial anus rather than intestinal anastomosis in delayed cases of acute obstruction.

This is necessitated by the fact that the advances made in intestinal surgery have a tendency to modify the judgment requisite, in certain conditions, that is necessary to prolong life. Boldness in operation is always induced when a certainty of results is possible. There is no question but that marked results have been gained both in technique, of which time is the most important factor, and certainty of endings.

The long tedious gastro-duodonostomy has given way to a perfect operation lasting in all but 13 minutes. There is less loss of vitality by length of time consumed and lessened risks of secondary trouble, by lessening of multiplicity in the technique. It is by this that the question of artificial anus is lost sight of.

The grounds I have taken have been forced on me by observation of cases that have fallen into my hands necessitating operation. They are based on an experience of intestinal work, that has convinced me of the feasibility of an anastomosis only under certain conditions.

I premise, by recognizing the fact that intestinal operations to be well and quickly done should be done by those who have had experience in the handling of this delicate tract.

It is a misfortune that these cases, as a rule, no not fall into the hands of the operator until certain pathological changes have taken place altering structure physiological and anatomical.

The discussions on intestinal anastomosis have been numerous, principally experimental work. This is well, but there has been lost to consideration the enormous changes that take place in the abdominal cavity due to an acute obstruction. Let your experience run back over cases seen, call to mind the condition existing, and then tell me does it not require more than experimental work to prove the value of this radical operation?

Do not misunderstand me; I do not decry this operation, far from it; I have worked too long in this field not to appreciate its value; rather is my object to prevent bringing into disrepute this glorious advance in this once relegated branch. I have heard it said in a learned body by a man of experience that "Senn's" operation had not come to stay. I say it here, he knew not of what he spake. It has come to stop, but judgment must be used or overzealousness will bring failure and discredit.

The pathological changes that take place in cases of acute obstruction, whatever the cause, are marked, and directly in proportion to condition of injury and length of time they persist. It is these changes that must modify operation.

If the existing trouble could be positively diagnosed and operation be allowed immediately then intestinal anastomosis would be proper and successful; but if the reverse is the case, which is the rule, the question must arise, what will be the result?

It is not always the inflammatory changes at the point of obstruction that give rise to difficulty, but the alteration on anatomical relation and change in structure by distension due directly to obstruction.

* Read before the Tri-State Medical Association, at Chattanooga, Tenn., Oct. 29th, 1891.

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The tissues of the intestines are softened, lessened in vitality and easily destroyed. Inequality in the size of the proximal and distal ends is excessively marked and interferes with just coaptation with a persistency of relation. The softness of tissue renders uncertain the surety of sutures. As handling the intestines in these operations always produces paralysis, the addition of this to the already paralyzed bowel by overdistension may complicate the case.

The distended intestines interfere with rapid work and as time is an exceedingly important factor in these cases, prolongation of the operation only favors failure by lowering the vitality, which is already too low.

The tendency has been to do too much.

While advocating this operation, I do not overlook the fact that a too long discontinuance of intestinal action in the cut off portion results in contraction and change of structure.

There is one condition that occurs in all these states in which there is change in the nutritive supply to the mesentery, and that is, contraction of this tissue and drawing of the intestines closer to the spine, and limitation of their action. Therefore no definiteness can be reached of the ultimate ending of an operation that is performed at this time. Change in mesenteric length may change direction of the canal and lessen its function, also the possibility of drawing upon the opposed bowel and interference with the adhesion.

This is not a state that can be overlooked. My experience, experimental and otherwise, has proved to my satisfaction the existence of this condition, with a persistency of the shortening. The delicacy of this tissue and its excessive vascularity will readily account for this. If you have done section for acute peritonitis tell me what was the condition of the omentum? I have always found it drawn up, unless fastened by adhesions, to its gastro-duodenal attachment, bearing no resemblance to the normal. The mesentery is the same tissue, hence the same tendency.

The law of serous cavities is that any inflammation is diffused over the whole surface unless limited by adhesive contact. This is a rule without question.

The rapid restoration after an artificial anus is made is simply marvelous. There is entire abatement of all symptoms and a return of the bowel to its normal state. The intestine does not empty itself by its own contraction, but by atmospheric pressure through the abdominal wall. Therefore evacuation of the canal goes on sufficient to give relief while the intestine is gaining tone.

It is not the object of this paper to discuss the special conditions that give rise to acute obstruction that are by circumstances forced to this conclusion.

The existing primary cause will modify the technique as condition, but the rules to govern the formation of an artificial anus are more or less positive. They are the adjustment of the affected bowel in proper condition and close coaptation of peritoneal surface to peritoneal surface, and by this securing rapid and perfect closure of the abdominal cavity.

The division of the operation into two stages or the "delayed opening of the intestines" is not possible. This is an operation of necessity; immediate relief is the object. Neither is the question whether the opening should be in the inguinal or lumbar region. Lumbar colotomy is out of the question for anatomical reasons.

The attachment of the intestine to the parietal peritoneum is best accomplished by continuous suture passed through the peritoneum and sub-peritoneal fascia of the intestine, then through the parietal peritoneum. I have found well-prepared catgut the most satisfactory suture. I have had the silk suture give rise to ulceration, formation of abscess, necessitating care, poor incision and considerable difficulty in its removal.

In many of these cases the long-continued distension has so destroyed the vitality of the peritoneum of the bowel that it becomes questionable if rapid adhesion will take place. As perfect closure of the abdominal cavity is a necessity, this latter state is one of anxiety. As the plasma from the irritated peritoneal surface is quickly organized, fæcal contact will not give rise to annoyance, but if the leucocytes which are thrown out in this organizable substance are not sufficiently vital, then softening of the plasma must take place quickly.

To aid in getting rapid union and likewise to infuse life, as it were, into the lowered tissue, I have taken advantage of the blood-supply of the omentum. This I have brought down, tucking it around the bowel to be attached and then included it into the suture. This, it can readily be seen, has a two-fold purpose; not only does it infuse new life into the bowel tissue, but acts like a packing in preventing fæcal entrance into the peritoneal cavity. It may be said that this complicates matters when the after-operation is done, by increasing the adhesive surface. The certainty gained far out-balances this.

The use of the omentum is premised in those cases where it is not changed by inflammatory action.

The abdominal incision should be sufficiently large to allow of easy work. The upper and lower ends of the incision can be brought together after the sides of wound and bowel have been united. This facilitates the operation. The line of incision can be covered with iodoformized collodion to protect it from contact.

The after-treatment is embraced in one word, cleanliness.

The time for the second operation, that of anastomosis, is governed by condition of patient. The sooner done, consistent with safety, the better. There can be no rule to guide, every case depending on the judgment of the operator.

FRIEDRICH'S ATAXIA — ITS RELATION TO THE CONDUCTING PATHS IN THE SPINAL CORD.

At the Congress of American Physicians and Surgeons, Dr. David Inglis, of Detroit, read a paper upon the above subject before the American Neurological Association.

He reports, in brief, a case of Friedrich's ataxia in a boy of six years of age, in which the symptoms comformed accurately to Friedrich's own summary of the characters of the disease, viz: "Impairment in the combination and harmony of movements developing gradually and spreading from the lower to the upper half of the body, and always involving finally the organs of speech. Sensibility and the functions of the special senses of the brain being intact; paralysis of the sphincters and trophic disturbances are absent, less common phenomena are curvature of the spine, sensations of vertigo and nystagmus. From a clinical point of view, we must regard the disease as a progressive paralysis of the faculty of combination of movements."

A review of the thirteen recorded autopsies shows a practical agreement that the pathological condition underlying the disease consists in a progressive sclerosis which always affects the column of Goll, the column of Burdach also, but not so completely, the direct cerebellar tracts with Clarke's column in most cases, and the crossed pyramidal tract in some cases, but the sclerosis is here not so intense. We have to deal with a disease of the tracts which degenerate upward, which are usually looked upon as centripetal and as conveying sensory impulses.

Author contends that the symptoms of Friedrich's ataxia afford a demonstration that these tracts do not convey sensory impulses upward, for sensation is not impaired, but that they are the main tracts for the conveyance of co-ordinated motor impulses downwards; that their anatomical relations with the medulla, cerebellum and mid-brain, as well as the facts of Friedrich's disease agree in showing them to act to co-ordinate motor impulses of the mid-brain, cerebellum and higher and lower levels of the cord.

The facts of embryology strengthen this theory; at the end of the fœtal life, at a time when the pyramidal tracts are undeveloped, the posterior columns and direct cerebellar tracts are complete. Their function evidently begins at once after birth. When we remember that the new-born infant is characterized, not by voluntary control of its muscles, not by accuracy of sense perception, but by an extensive co-ordination of involuntary motor functions, the conclusion is easy, that these, the only tracts fully developed at birth, subserve these purposes.

The direction of Wallerian degeneration is not necessarily the same as the direction of normal physiological impulses in any given nerve tract.

ACUTE DYSENTERY.*

BY J. F. HARTER, M.D.

This is one of our most grave and often insidious diseases. It has a great tendency to recur, or lapse into a chronic form.

It is a febrile disease, with inflammation of the mucous membrane and connective tissue of the large intestines. At times, the liver, kidneys, and even the spleen, are involved.

Exudation, ulceration and sloughing go hand in hand, as it were.

Death may ensue in ten or fifteen days, or recovery may take take in two, three or four weeks.

Or, on the other hand, the disease may extend over several weeks, and finally lapse into a chronic form.

Upon the subject of morbid anatomy, our writers are at variance, and great is the diversity of the opinions of Chomel, Cruveilhier, Craigie, Cheyne, Abercrombie, Rokitaush, Graves, Mayne, Finger, Baly, Pringle, Zimmerman, and a host of others whom I might mention. But from my own close observation of the character of the stools and the accompanying symptoms, I am convinced that there is turgescence, softening, exudation and ulceration of the rectum and colon.

Dysentery is most common in the latter part of summer and beginning of autumn, when we have warm days and cool nights, and sudden changes in temperature.

Or exposure to dampness, indigestible food, ill-regulated diet, intemperance, fatigue, bad drinking water and paludal poison will produce it.

An attack of dysentery usually commences as a simple diarrhœa, with pain in the lower part of the abdomen; the desire to go to stool becomes frequent. The stools soon become muco-fecal and streaked or dotted with blood. As the disease proceeds, there is increasing tormina and tenesmus.

An intensely burning pain in the anus and rectum, together with the tenesmus, are characteristic symptoms.

There is more or less fever, temperature in the axilla from 100° to 102° F. The skin is dry and hot. Great thirst. Loss of appetite.

* Read before the Military Tract Medical Association, October 21st, 1891, at Peoria, Ill.

At the onset, it may be impossible to distinguish diarrhœa from dysentery; but in the course of twenty-four or thirty-six hours with the above symptoms, we can arrive at a positive diagnosis. And now, I will introduce what we might claim to be a typical but very grave case of acute dysentery; and give you the symptoms and treatment as I best remember them.

Frankie Thayer, 8 years old, had been visiting relatives in Chillicothe, and returned home on the evening of July 7th, 1890; during the night he was taken with griping and purging.

The purging continued, and the stools, which were at first feculent and watery, soon became slimy and reddish, afterwards bloody.

The tenesmus, tormina and frequency of the stools increased.

As the case advanced, the amount of blood increased; and we detected shreds of exudation and mucous membrane in the stools. We also detected the offensive odor which is peculiar to dysentery.

As the case advanced, the odor became putrid, and we concluded the end was approaching.

The number of stools during the first fourteen days were 12 to 15 per day. From the fourteenth to the twenty-eighth day, the number of stools averaged 6 to 8 daily. From the twenty-eighth to thirty-sixth day, 4 to 5 daily.

During the first few days, the tongue was coated with a yellowish-white fur. It afterwards became dry and parched. Finally, it became clean, glazed, and beef-steaky.

The temperature throughout the disease ran from 100° to 102° F.

There was almost complete anorexia.

The intellect remained perfect, and the frequent shrewd remarks which were characteristic of Frankie were often amusing; and his logical reasoning was surprising.

As time advanced, his pulse became weak and thready, and his body greatly emaciated; his features became pale and sharp, denoting the approach of death.

About the twenty-first day there appeared perpura hæmorrhagica over the abdomen, extending over the body and thighs.

We then had no hopes of his recovery, and the parents were almost heart-broken to

think they must part with their only child. But we continued to battle with the monster Death. His life hung on a brittle thread for the following week. We daily and hourly expected his demise.

But about the twenty-eighth day his condition began to take a change for the better. His local and general symptoms began to yield; his stools became less frequent from day to day; his appetite returned.

Convalescence was very slow, but continued until his health was restored, and he is now attending school in Mendota, Ill., their present home.

The cause in this case was improper diet, overheating the body and drinking ice-cold lemonade.

During Frankie's visit in Chillicothe, he and his cousin were allowed to go to the restaurant and buy fruits, nuts, and candy, and have a good time generally.

On July 7th, when they started home, they had to walk several blocks to the depot through the heat of the day, and, it being nearly train time, they walked as rapidly as possible, arriving at the depot hot and thirsty. They procured and drank some ice-cold lemonade. The result was as above related.

The first indication as to treatment in this case was to relieve the griping, purging, and acidity of the stomach, for which I gave the following:

℞ Fl. ext. opii deod., ♏ xx.
Syr. tolu, ℥ ss.
Neutralizing cordial, ad ℥ ij.

M. Sig.—Give teaspoonful every 1 or 2 hours.

On July 10th, the second day of the illness, I prescribed:

℞ Mor. sul.,
Hydrarg. chlor. mite, ää gr. j.
Bis. sub. nit., grs. xl.

M. and fill capsules No. xvj.
Sig.—Give one every hour.

On the 11th I prescribed:

℞ Mor. sul., gr. j.
Bis. subnit., grs. xx.

M. and fill capsules No. xvj.
Sig.—Give one every half-hour or hour, according to the frequency of the stools.

Also ordered enema of starch and laudanum after each discharge.

On the 13th I prescribed:

℞ Starch, ℥ ss.
Tannin, grs. x.
Tr. opii. ℥ j.
Fl. ext. hamamelis, ad ℥ vj.

M. Sig.—Inject 1 drachm after each stool.

And internally:

℞ Mor. sul., gr. j.
Quin. sul., grs. viij.
Bis. subnit., grs. xvj.
Fl. ext. matico, ♏ xv.

M. and fill capsules No. xvj.
Sig.—Give one every 1 or 2 hours.

On the 14th I found the pulse very rapid, the skin dry and hot, and I ordered the following:

℞ Tr. aconite, ♏ v.
Fl. ext. ipecac, ♏ iij.
Aq. pure, ad ℥ ij.

M. Sig.—Give teaspooonful every two hours along with the bis. quin., etc.

On the 15th we concluded the small injections of starch, tannin, etc., would not relieve the tenesmus and burning, so we ordered:

℞ Cocaine mur., gr. j.
Bis. sub. nit., ℥ j.
Starch, ℥ iij.
Aq. pure, ad ℥ iij.

M. Sig.—Use after each stool.

On the 16th we ordered a smaller and stronger quantity but without any good results.

On the 16th we prescribed:

℞ Bis. sub. nit., } ää ℥ jss.
Acacia, pulv., }
Fl. ext. opii, deod., ♏ lxxx.
Fl. ext. ipecac, ♏ ij.
Syr. tolu, ℥ j.
Aq., aromat, ad ℥ ij.

M. Sig.--Teaspoonful every 3 or 4 hours.

On the 21st we ordered:

℞ Acid muriate, ♏ xx.
Syr. simplex, ℥ j.
Aq., pure, ad ℥ iij.

M. Sig.—Teaspoonful in little water ad libitum.

And the following:

℞ Opium, pwd., grs. iiij.
Bis. sub. nit., ℥ ss.

Mix and fill capsules No. viij.
Sig.—One every 3 or 4 hours.

On the 23d we prescribed:

℞ Quin. sul., grs. xv.
Acid sul. arom., ♏ v.

Mix and fill capsules No. viij.
Sig.—One every 3 or 4 hours, alternating the bis. and opii.

℞ Opium, pwd., grs. ij.
Bis. sub. nit., grs. xxv.

Mix and fill capsules No. viij.
Sig.—One every 3 or 4 hours.

We continued the quin. and acid up to the 28th when we prescribed elix. pepsin and bis. in one-half teaspoonful doses after eating.

On the 29th we reduced the opium to ⅛ gr. per dose.

On the 31st we resumed the use of the quinine and sal. acid, which we continued up to Aug. 8th when we prescribed:

℞ Quin. sul., Iron pyrophosphate, } āā grs. viij.

Mix and fill capsules xvj.
Sig.—One every 4 hours.

Opium and bis. had been and was still continued as required.

After the first stage of the disease, we used as much alcoholic stimulants as we could persuade him to take in the shape of wine, brandy, whisky, etc. And at two different times, when the pulse was scarcely perceptible and the breathing had almost ceased, we revived our little patient by the hypodermic use of old bourbon.

Aside from the internal treatment we used tepid sponge baths and all hygienic measures possible.

We removed all discharges from the room soon as possible, burnt them and the cloths containing them.

The diet was bland and nutritious, as boiled milk and flour, milk and lime water, beef-tea, chicken-tea, raw beef rasped fine, vegetable soups, oysters, etc.

To relieve the thirst, we gave infusion of slippery-elm bark, toast-water, boiled water, small bits of ice, tea, etc.

During his sickness, Drs. M. S. Hooper, of Stronghurst, W. K. Smith, of La Harpe, and David McDill, of Burlington, Iowa, were called to see the case with me.

It was upon the suggestions of Dr. McDill that we gave the unusually large doses of gum opium. Now in conclusion, a few words only in regard to prognosis. From this case we should learn to never give up the ship, but claim that as long as there is life there is hope.

CANNABIS INDICA AS AN ANODYNE AND HYPNOTIC.*

BY J. B. MATTISON, M. D.†

Indian hemp is not a poison. This statement is made, just here, because the writer thinks a fear of its toxic power is one reason why this drug is not more largely used. This mistaken idea lessens its value, because it is not pushed to the point of securing a full therapeutic effect. This is a fact. One of the best pharmacologists in this country not long since expressed a very touching solicitude lest the writer's advocating robust doses of this valued drug might cause a decrease in the census that would seriously imperil his professional repute.

There is not on record any well-attested case of death from cannabis Indica. Potter says: "Death has never been produced." Hare asserts: "No case of death from its use in man is on record." Bartholow affirms: "Cases of acute poisoning have never been reported." Stillé states: "We are not acquainted with any instance of death." Wood declares: "Hemp is not a dangerous drug; even the largest doses do not compromise life. No acute fatal poisoning has been reported." A prolonged personal experience, compassing the history of many cases—men and women—and hundreds of doses, ranging from 30 to 60 minims of the fluid extract, has never brought any anxiety along toxic lines.

Having thus brushed aside this bugbear, we may note, *en passant*, the statement, on high authority—Potter—that "cannabis was formerly much employed as an anodyne and hypnotic. It is now somewhat out of fashion." Why this early repute has not been continued, is due to a cause cited,

* Read before the Medical Society of the County of Kings, Sept. 15, 1891.

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coupled with non-reliable products, and, doubtless, the coming of other analgesic-soporifics.

The first cause need not longer obtain; the second can be removed by careful choosing and trial; while the last should not preclude the use of a drug that has a special value in some morbid conditions, and the intrinsic merit and superior safety of which entitle it to the place it once held in therapeutics. Digitalis, for a time, was in disuse. So, too, codeine, which my experience has proved a valued anodyne—one worthy a wider use than it has had, and which I think it will surely get—and impelled me to present the American Medical Association, at its last meeting, with a paper thereon, that I trust you have done me the honor to read.

There is a consensus of opinion among writers on therapeutics as to the anti-agrypnic, analgesic anæsthetic power of Indian hemp. For the latter it was used prior to ether. Wood, testing it in himself, asserted "marked anæsthesia of the skin all day." Stillé says: "Its anæsthetic virtue is shown in allaying the intense itching of eczema, so as to permit sleep." And that a similar trivial disorder may have a serious outcome is proven by the fact that a well-marked case of triple addiction, under my care last year —a medical man who took daily 15 grains morphine with 35 grains cocaine, subcutaneously, and 14 ounces of rum—had its rise in a morphia hypodermic taken to relieve urticaria.

Stillé says: "Its curative powers are unquestionable in spasmodic and painful affections." Noting the latter in detail, its most important use is in that opprobrium of the healing art—migraine. In a paper by the writer, eight years ago, "Opium Addiction among Medical Men,"—Medical Record, June 9th, 1883—in reviewing the causes, this was asserted the most frequent. Enlarged experience has not changed that opinion. A case from such cause, woman, ten years morphia taking, 30 grains, by mouth, daily, is now under my care. A sister, so situated, from the same cause, awaits similar service; and their mother took morphia for headache till death ended her need.

Ringer says: "No single drug have I found so useful in migraine." He thinks it acts well in all forms, but seems most useful in preventing rather than arresting. He deems it specially effective in attacks due to fatigue, anxiety, or climacteric change. Dr. E. C. Seguin, in 1877, commended it highly.

Dr. Wharton Sinkler, in a paper on migraine, gives first place to cannabis, and thinks it of more value in this form of headache than any other. Richard Green, who first commended it in this complaint, thinks it not only relieves, but cures; in nearly all cases giving lasting relief.

In the British Medical Journal, July 4th, 1891, Dr. Suckling, Professor of Medicine, Queen's College, Birmingham, writes: "I have during the last few years been accustomed to prescribe Indian hemp in many conditions, and this drug seems to me to deserve a better repute than it has obtained." He calls it "almost a specific" in a form of insanity peculiar to women, caused by mental worry or moral shock, in which it clearly acts as a psychic anodyne—"seems to remove the mental distress and unrest." After commending it in melancholia and mania, he says: "In migraine the drug is of great value; a pill containing one-half grain of the extract, with or without a one-quarter grain of phosphate of zinc, will often immediately check an attack, and if the pill be given twice a day continuously, the severity and frequency of the attacks are often much diminished. I have met with patients who have been incapacitated for work from the frequency of the attacks, and who have been enabled by the use of Indian hemp to resume their employment." In a personal note from the doctor he wrote: "I have used Indian hemp as an anodyne and hypnotic, and find it most useful in both ways. I have never seen any ill results."

Anstie commends it in migraine and the pains of chronic chloral and alcohol-taking. In his work on neuralgia—the best ever written, and one which I advise every one to read, if not read—he says: "From one-quarter to one-half grain of *good extract* of cannabis, repeated in two hours, if it has not produced sleep, is an excellent remedy in migraine of the young. It is very important in this disease that *the habit of long neuralgic paroxysms should not be set up*."

Russell Reynolds thinks that in neuralgia,

migraine and neuritis, even of long standing, it is by far the best of drugs. Mackenzie has used it with much success in constant all-day headache, not dependent on anæmia or peripheral irritation. Bastian and Reynolds commend it in the delirium of cerebral softening, and the latter says it calms the head pain and unrest of epileptics. In cardiac tumult, in senile insomnia and delirium, and the night unrest of general paresis, it acts well.

In some diseases common to women, hemp works well. Grailly Hewitt says that in many cases of uterine cancer it allays or prevents pain. Ringer asserts it sometimes is signally useful in dysmenorrhœa. West commends it here. Potter states its anodyne power is marked in chronic metritis and dysmennorrhœa; and Hare thinks it of great value in chronic uterine irritation and nervous and spasmodic dysmenorrhœa. Donavan and Fuller claim it of value in migraine and chronic rheumatism; and Mackenzie in hay fever and hay asthma.

In genito-urinary disorder it often acts kindly—the renal pain of Bright's disease; in vesical spasm; retention of urine, and chordee; and it calms the pain of clap equal to sandal or copaiba, and is less unpleasant. The distress of gastric ulcer and gastrodynia are eased by it, and in other and varied neuralgias it serves one well. In some cases of advanced phthisis and other cureless disease it will bring euthanasia by allaying pain and unrest.

My experience with hemp covers more than a decade, many cases, and several pounds of fluid extract. It is proper to state that these cases have been solely habitués or ex-habitués of opium, chloral or cocaine. In these, often, it has proven an efficient substitute for the poppy. Its power in this regard has sometimes surprised me. Both sexes took it, and with some no other drug anodyne was used. One of these—a naval surgeon, nine years a 10 grains daily subcutaneous morphia taker—recovered with less than a dozen doses. My oldest female patient—64—found its service complete. Its action has varied, as some cases respond more fully. This during the early abstinence time. Later, it has done good in the post-poppy neuralgiæ, especially the cranial kind, and it has calmed mental pain and unrest.

As a hypnotic, Fromuller gave hemp in 1,000 cases. Success, 530; partial success, 215; no success, 253. As such in delirium tremens, Potter declares it "the best." Anstie thought it better than opium when the pulse is feeble. Phillips asserts it "one of the most useful." Tyrrell and Beddoe say the same. Suckling's opinion has been given. McConnell commends it in the insomnia of chronic cardiac and renal disease. Oxley lauds it in the insomnia of severe chorea, especially in children; the tincture "more effectual than any other hypnotic."

My own results proved it a satisfactory soporific, even oftener than as an anodyne. And this, too, under conditions that test thoroughly the power of any drug in this regard, for the insomnia of ex-poppy habitués finds its equal only in the agrypnia of the insane. With many, no other hypnotic was used. The sleep has been sound and refreshing. Many cases showed a notable influence to it as regards time—somewhat akin to sulfonal. Two hours sufficed. The first, pleasant stimulation; the second, increasing drowsiness, ending in sleep.

Again, I admit my special cases may involve a condition making them more easily subject to hemp hypnosis, but these do not preclude the wisdom of its trial with other patients in whom it may act equally well.

Writers on cannabis refer to certain peculiar effects—which, in our thinking, are more often peculiar to the patient—that may here be noted. One is a mild intoxication. I say "mild," because the hashish, assassin-like, running-a-muck form is less fact than fancy. It is said temperament largely determines the mental effect, whether it be grave or gay, merry or mad. Most of my cases—when such—have been in a merry mood. Of the hundreds of times given, only once did it excite to violence. That was a young physician, six years ago, in which it came close to a personal assault on the writer that was warded off only by superior strength. The patient afterward avowed no knowledge of such a situation, was profuse in apology, and stated that once, after taking hemp simply to note results, he routed

every one out of the house, including his own grandmother!

Catalepsy is a rare sequence. We have seen it once. A woman, 23, brunette, small but active, took, in early evening, 40 minims Squibb's fluid extract as a soporific. After playing cards half an hour, she began to be very jolly, and it was suggested she retire. Visiting her later, she was found completely cataleptic. It soon subsided, sleep followed, and no after ill-effect.

Failure with hemp is largely due to inferior preparations, and this has much to do with its limited use. It should never be called inert till full trial with an active product proves it.

Wood thinks the English extracts best. I have used, mainly, Squibb's fluid extract, and Parke, Davis & Co.'s Normal Liquid. They are reliable. Hare commends the solid extract made by the latter.

Cannabine tannate and cannabinone. are essentially hypnotic. The former has been found by Prior, Vobelsgesang, Mendel and others, a satisfactory soporific. Prior gave it one hundred times to thirty-five persons—the most with success. In hysteric cases not calmed by chloral or opium, it acts specially well. In the small dose of one grain it has brought sleep when one-third grain morphia failed.

Another cause of failure is too timid giving. I am convinced that the dose of books is, often, too small. The only true way is, once a good extract, push it to full effect. My doses have been large—40 to 60 minims of the fluid extract—over-large for the non-narcotic habitué; but, as we years ago asserted, habitual poppy taking begets a peculiar tolerance of other nervines, and they must be more robustly given. Both sexes have taken them—women frequently—with no other effect than quiet and sleep. I think, for many, small doses are stimulant and exciting; large ones, sedative and quieting. They are the outcome of an experience with smaller doses that failed of effect desired. They prove hemp harmless, and they add proof to the opinion of most neurologists that, once a nervine needed, it is often better to give one full dose than several small.

The tincture—3 grains to the drachm—may be given in doses of 20 to 60 minims. The fluid extract, 5 to 20 minims. The solid extract, ½ to 2 grains. Tannate of cannabin, 5 to 15 grains. Cannabinone, ½ to 1½ grains. Cannabinone with milk sugar, 5 to 15 grains, and each repeated or increased till a full effect is secured. It is said that in women cannabinone acts twice as strongly as in men. In headache, periodical or long continued, ½ to 2 grains solid extract may be given each hour or two till the attack is arrested, and then continued in a similar dose, morning and night, for weeks or months. It is important not to quit the drug during a respite from pain.

I close this paper by again asking attention to the need of giving hemp in migraine. Were its use limited to this alone, its worth, direct and indirect, would be greater than most imagine. Bear in mind the bane of American women is headache. Recollect that hemp eases pain without disturbing stomach and secretions so often as opium, and that competent men think it not only calmative, but curative. Above all, remember the close genetic relation of migraine relieved by opium, to a disease that spares neither sex, state nor condition.

Dr. Suckling wrote me: "The young men rarely prescribe it." To them I specially commend it. With a wish for speedy effect, it is so easy to use that modern mischief-maker, hypodermic morphia, that they are prone to forget remote results of incautious opiate giving.

Would that the wisdom which has come to their professional fathers through, it may be, a hapless experience, might serve them to steer clear of narcotic shoals on which many a patient has gone awreck.

Indian hemp is not here lauded as a specific. It will, at times, fail. So do other drugs. But the many cases in which it acts well, entitle it to a large and lasting confidence.

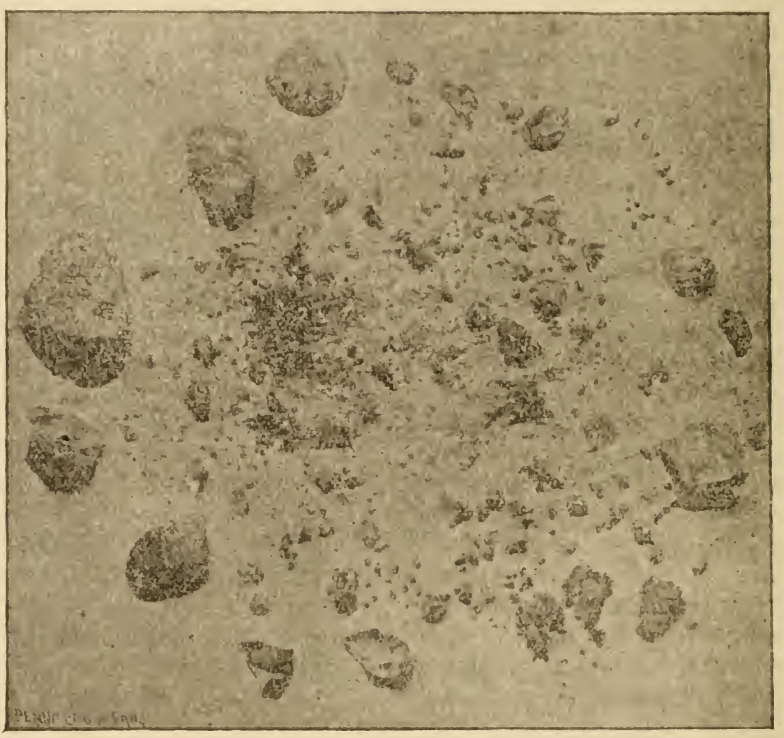
My experience warrants this statement: cannabis Indica is, often, a safe and successful anodyne and hypnotic.

Brooklyn Ave., Brooklyn.

STONE IN THE BLADDER.

BY J. J. MAXFIELD, M.D.

A year ago Mr. A., 51 years old, consulted me for an old standing and intractable cystitis, as he supposed and had been informed by two physicians. I suggested an exploration, and readily detected a stone. It was a large one, and it was so hard that you could hear the click of the instrument in any part of my office. I advised that he should have an operation performed, but as his brother had died after same operation a few years previously, he was afraid and refused to consent. In view to palliate, I ordered him to drink one quart of Buffalo Lithia Water every day. Washing out the bladder once a day with the same, warm, a careful attention to diet and bowels, with gentle tonics. This treatment was faithfully kept up for nine months, when pus appeared in the urine, and the operation could no longer be delayed. During the time he was under the treatment, large quantities of débris came away; some of the pieces were so large that it was only by great effort that they were passed via urethra. None of these were saved. The day before the operation, on the 20th day of June, I examined him again, and the stone did not seem so large nor was the click so pronounced, though we could tell that there was a stone present by the grating as from a rough body. On the 21st I did the left lateral operation, and after getting into the bladder, I introduced the forceps, grasped the stone and pulling it away, I found it was



like a mass of putty filled with sand. It was sacculated, and there was a quantity of pus in the viscus. With forceps, gouge, curette and fingers I finally got it all away. No part of it was so hard but that it could not be crushed with very little effort between the fingers. After the fragments were allowed to dry, they became hard.

The cut will illustrate better than I could tell how some of the mass looked, though a great deal of the finest particles were lost in the irrigation.

It will be noticed that there were very few large pieces, and these were so soft that they would drop to pieces on the slightest provocation. This friable quality showed me *why* I did not get so pronounced a sound at my second examination, nine months after the

first. Had I known before I operated what I knew afterward, I would not have done it, but with a lithotrite I would have crushed it and washed it out, though I believe firmly that if I had continued the treatment of the Buffalo Lithia Water a few weeks more the stone would have fallen to pieces. The outer segments were roughened, showing the disintegrating action of the water in dissolving it. I believe the case is unique in every particular, and shows the value of Buffalo Lithia Water so clearly that I thought it worth repeating. The patient made a complete recovery without an accident to mar it. The total weight of the pieces saved was 213 grains.—*The Prescription.*

CLINICAL REPORT.

Pulmonary Gangrene.—(Dr. Peabody, at Bellevue Hospital). This man is 47 years old. Family history good. Last June, while eating a plate of chowder, some of it went down "the wrong way," and the patient had a violent fit of coughing. Since that time he has been subject to frequent attacks of coughing, accompanied by fever and night-sweats and abundant expectoration, foul and purulent in character. A few days ago he coughed up this small piece of bone. He has had no hæmoptyses. Upon physical examination we find a cavity near the base of the right lung. A microscopical examination fails to reveal tubercle bacilli in his sputum.

This is as good a history of pulmonary gangrene as you will ever be likely to get. The best evidence of gangrene is the presence of the elastic fibres of the lung tissue in the expectorated matter, and a patient search is likely to reveal them. One of the most common causes of pulmonary gangrene is carcinoma of the mouth, tongue or pharynx; small particles of the diseased tissues are inhaled into the air-passages.

In gangrene of the lung it is well to give a very grave prognosis, although such cases do occasionally recover. We are apt to bring about an apparent cure, and then have a relapse. When recovery takes place, the gangrenous area is supposed to be encapsulated by cicatricial tissue, which prevents the infection of deeper parts of the lung. As to the matter of treatment: You must, first of all, improve the patient's general health with tonics, cod-liver oil, etc., very much the same as the treatment for tuberculosis. Then, by means of a spray, bring an antiseptic in contact with the gangrenous tissue. For this purpose, weak solutions of boric or salicylic or carbolic acids have been employed, as well as turpentine, and I consider the latter as the best and most satisfactory remedy in these cases.

Cirrhosis of the Liver.—(Dr. Delafield, at the Vanderbilt Clinic.) This man is 51 years of age; a native of Australia, and a sailor by occupation. He gives the following history: His illness dates from the early part of 1889, when he suffered from loss of appetite, vomiting, pain in the epigastrium, and loss of flesh and strength. He was admitted into the New York Hospital in May, 1889, and remained until the following October. While there he was operated upon by Dr. Bull, probably for stenosis of the pyloris. The pyloris and gall-bladder were found normal, but on the under surface of the left lobe of the liver two small hard masses were found, and the entire surface was rough and nodular. These masses were supposed to be carcinoma of the liver, and the abdomen was closed. You can see how the cicatrix left by the operation has spread and I think this is one of the serious objections, which is not commonly brought into view, of such an operation.

After the operation his pain and vomiting continued, and he is still losing flesh and strength. He is slightly jaundiced. He suffers from chronic constipatian. On one occasion he passed a large amount of bloody urine. An examination of his blood reveals no malarial organisms nor any increase in the number of white blood cells. His urine has a specific gravity of 1024; no albumen; contains bile pigment. Upon examination we find that the spleen is considerably enlarged, while the liver is diminished in size.

This man is probably suffering from cirrhosis of the liver. The nodular condition and hard masses found on the under surface of the liver two years ago were probably due to that disease; if it was carcinoma, the man

should not be here now. The most important element in the treatment of these cases is the feeding; they must be fed so that the food will be retained, if possible. I would feed this man every three hours, beginning in the morning at about 7 o'clock, with a tumblerful of milk; at 10 o'clock wash out the stomach, and pour in through the tube one-half pint of cream; at 1 o'clock give him scraped beef; at 4 o'clock give him another dose of milk or koumys; at 7 o'clock repeat the scraped beef, and at 10 o'clock repeat the milk or koumys. In connection with this treatment, the bowels should be moved every day, preferably by enemeta.

Late Syphilitic Lesions.—(Dr. Wyeth at the Polyclinic.)—This woman comes here to inquire whether any operation is feasible to improve the appearance of her face. As the result of some constitutional trouble, the nose has entirely disappeared, the cavity extending as far back as the antrum of Highmore. There is nothing left of the nasal cartilages or the turbinated bones.

It is often very difficult to remedy these defects. It is not possible to follow any particular plan; each case must be studied by itself. The question is, whether it would be preferable to perform an operation or apply some artificial apparatus. The latter is usually made in combination with eye-glasses, by which it is kept in place, This woman says she has worn one, but that it did not prove satisfactory. A plastic operation might be performed, bringing over the skin from the cheek on each side of the nose, and supplementing the operation later on by bringing down a flap from the forehead, between the eyes, but there is no framework here upon which to build, and a depression would still exist. Some years ago, Dr. Sabine built a framework for the nose upon which to fasten the skin-flap by splitting the third phalanx of the ring-finger (taking the left hand, as that is less useful than the right) and carrying the finger up to the nose and keeping it there until union occurred, and then amputating it between the second and third phalanxes.

I wish to say a few words about the cause of this woman's trouble. She also presents a scar over the right radius. Her lesions, no doubt, are the result of syphilitic osteomata and condylomata, and they prove that when she had syphilis she was not treated in the right way, either through her own fault or that of a careless or incompetent physician. There is only one class of patients in whom such a result as this would be excusable, and that is those who cannot take mercury or potassium iodide, and such cases are extremely rare. Another point to be remembered is that the diagnosis of syphilis should not be made upon the appearance of the sore alone. The syphilitic virus becomes obscured so easily by the vaginal secretions, by the contact of urine, or by chafing, that in nineteen times out of twenty we do not get the ideal Hunterian chancre—such as the professors used to speak a poem about when we went to college. The inflammation in the groin attending syphilis is slow, non-inflammatory, not painful, attacking one gland after another, hard and leathery to the touch and movable under the skin. That is almost positive proof of syphilis, but in some instances this condition is obscured by a coincident acute inflammation of the glands, so that neither by the sore nor the glandular enlargement can we make a certain diagnosis. The next link is the character of the eruption. I have never yet seen a case of syphilis where the eruption did not appear.

As to the treatment of syphilis, I divide it into four stages of six months each. During the first six months I give mercury alone, preferably in the form of protoiodide, one-fourth of a grain two or three or four times a day; during the second six months mercury combined with a small quantity of potassium iodide; during the third six months increase the amount of potassium iodide, and during the last six months give that drug entirely.

The Secretary of the Michigan State Board of Health has arranged with the United States authorities at Washington and New York, to have notice of names and destinations of all immigrants arriving at New York from infected vessels or places who are bound for any part of Michigan. This enables the State Board to put local health officers on guard against the spreading of dangerous contagious diseases in Michigan by such immigrants.

Correspondence.

A MODERN SANITARIUM.

Having spent several days recently at the sanitarium at Battle Creek, Michigan, it gives me much pleasure to express my appreciation of its merits both to the public and the medical profession. Situated in a salubrious location midway between Lakes Michigan and Huron, in picturesque surroundings, amidst a delightfully shaded and flowered lawn, it is all that the æsthetic taste can desire. The buildings are spacious. The architecture beautiful, with furnishings in parlors and chambers equal to first class hotels, offering accomodations neat, attractive or luxurious as may be selected by the patient. Every room opens out to the pure air—sun parlors, spacious verandas and wide halls, giving ample space for exercise, make it both a very pleasant summer home, and delightful winter domicile—heated throughout by steam and lighted by electricity.

Connected with the main building is an extensive wing in which are arranged on separate floors the splendid system of baths, electric—radiant heat, Turkish, Russian, also massage and manual Swedish movement departments. Beneath is the mechanical Swedish movement room with its curious machinery run by steam power. Above this room is the large gymnasium in which more than a hundred patients can be exercised at one time.

Within a short distance from this main building is the new handsome surgical hospital—five stories high—with balconies to each story, all festooned with beautiful foliage plants and flowers, as at the main building also, most pleasant and attractive to the eye, and at once ridding the hospital of the gloom and dread with which it is usually invested. Within, the rooms are beautiful, the floors are polished, and at the bedside of each patient is a trained nurse in uniform, fitted to his or her duties. In the attic of this building is the operating room, used either in the day by its sky light, or equally well in the night with its brilliant reflected electric light.

Over the operator and his patient as well as over his skilled assistants, ladies and gentlemen comprising the surgical staff, is driven sterilized air through a large circular pipe. In this large building filled with patients there cannot be detected the faintest hospital odor, so perfectly aseptic is its atmosphere. This sanitarium, under the capable management of Dr. J. H. Kellogg, an accomplished, scholarly author, and scientific physician and most skilled surgeon, with national and international reputation, with his able corps of specialists, both ladies and gentlemen, with more than a hundred trained nurses, and with its splendid equipment, not surpassed if equaled in the world, with its food and menu prepared upon scientific principles, offers to the public all that is most beneficent in the care and treatment of the sick and diseased. This sanitarium is a splendid monument of the philanthropy of a few hundred liberal people, who contributed the money to purchase the site and erect and equip the buildings upon it. Not a dollar of its earnings have they ever or will they ever accept. The constitution and by-laws expressly "prohibit the use of its earnings in any other way than to improve the facilities of the institution, the advancement of sanitary reform and the treatment of the sick poor."

What a grand mission has this well equipped institution, and how scrupulously its purposes are carried out, cannot be known unless one could see its practical work and results by actual observation. Another feature of the good done here is the preparation of more than a hundred humble people, men and women, as educated and trained nurses, skilled in giving baths, massage and Swedish movement as well as the intelligent care of the sick.

This requires a two or three years course of study with recitations and their daily practical application. These people are elevated to a higher plane of usefulness and compensation for their work in life, which they perform with conscientiousness and fidelity. How valuable are the services of the skilled and intelligent nurse to the sick, and how few such are to be found throughout the land. How great is the demand for them; a hundred training schools could not supply it.

A most pleasant feature, of interest to the

patients, is Dr. Kellogg's course of lectures, regularly delivered in the parlor, twice a week, upon scientific and sanitary subjects, which he handles in a most delightful and profitable style, while Mrs. Kellogg interests the ladies in her lecture course upon domestic economy, the science of cookery and the laws of health as they are related to women.

We physicians who are immersed in the daily routine of professional duties, have often under our care cases which cannot surely have the advantages of the best treatment, by civil and home practice—neuroses, mental diseases, morphine and chloral habit, and chronic diseases of various kinds, which have baffled treatment. The success of the methods of this institution in the treatment and relief of the morphine habit has been so signal and complete, in two cases the writer has had there, they deserve special mention —where in six or seven weeks the habit was relieved completely which had been of as many years duration. The treatment of these as in all other cases is based upon a rational course with no charlatanry about it. For many such cases as those above noted the rest treatment, without medicine, the baths of various kinds, the massage and Swedish movement, the gymnasium, the diet regulated to suit the case, the early hours at night for rest, with all the discipline of such an institution will prove highly beneficial to all and curative to most. Such has been the result with not an inconsiderable number of patients the writer has sent to this institution in the past year.

J. W. Maddin, M. D.

169 N. Cherry St., Nashville, Tenn.

WHERE DO YOU DISSECT?

Doctor, where do you dissect? A society has been formed that will erect practitioner's halls, where the practicing physician can dissect, where lecture rooms, reading rooms, etc., will be arranged for his convenience.

If you want information as to this and a pamphlet concerning the ways and means of elevating our profession and making the practice of medicine more lucrative, send five two-cent stamps to Dr. J. F. Davison, Glendola, New Jersey.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THERAPEUTIC IMPOSTURES.

There are times when a medical journal may very properly turn aside from its ordinary work, to expose fraud and humbug. Not that the chasing after every medical delusion pays. The hold which quackery in all its forms has on the public is appalling, and only as the masses became really intelligent can this hold be broken. The extirpation of quackery has been found to be as difficult as the eradication of superstition from minds in a certain stage of evolution; and the task has been not not unfitly compared to the uprooting of certain rank, noxious weeds from soils to which these are adapted; if the ground is cleared to-day, another more pestilent vegetation will spring up to-morrow.

That persons living on a certain plane of civilization (and evolutionists teach that we have representatives of all stages of human evolution in our midst) should give credence to the promises of the charlatan is not strange. Few have yet attained the moral standpoint of King David who said in his heat that all men are liars; and when the quack holds up before the unwary and too credulous invalid a certain nostrum which the latter is assured has cured multitudes like himself, hope and confidence are awakened. The sick-man has neither the ability nor the disposition to weigh the evidence which is presented. One thing is certain—he has tried numerous remedies and perhaps numerous physicians, and regular treatment has failed to cure him; his disease may be essentially incurable, or it may require for its removal radical changes of a hygienic character impossible of obtention. Now if there is any one thing this patient earnestly desires, it is to get well, and he has

not enough knowledge of morbid processes or of the limitations of therapeutics to realize the difficulties in the way of his recovery. Nor does it seem to him improbable that the "irregular" may have resources at command of which the educated physician knows nothing—some new derivative from the "coal-tar series," and thrice welcome comes to the suffering man the evangel of the quack, so consonant with his belief, that somewhere in the mineral or vegetable kingdom Nature has provided just the remedy he needs.

On such faith, confidence and gullibility quackery has always thrived, and any brazen pretender who will advertise a "safe liver cure," "headache cure," or "kidney cure," may hope to make a fortune out of his nostrum, provided he duly trumpets his "discovery."

While therefore in the present state of social intelligence we expect little of the *profanum vulgus* but gullibility and a readiness to be plucked for the benefit of charlatans, we might naturally expect better things of educated physicians who certainly ought to represent humanity raised to a higher plane of culture and rationality. They certainly should not only teach the masses how not to be duped, but they should not be duped themselves. What, then, if it should be found that great numbers of highly cultured medical men have proved to be almost as gullible as the workman who spends a day's wages for a bottle of the latest "Liver Restorer" or "Kidney Renovator?"

We speak of what we have direct knowledge when we affirm that it is quite possible for the unscrupulous, eager to make money, to beguile unwary physicians by the hundreds and thousands into prescribing certain trade-mark preparations whose principle character is: 1, that they consist of well known medicinal substances (such as every physician has on his shelves and in his private medicine case); 2, that they come to the physician in the guise of secret medicines of whose formula he is ignorant; 3, that when their composition is made known they are found to be relatively inexpensive remedies, which in their patented form are sold at an exorbitant price.

Physicians all over the country have been favored (?) by mail with repeated samples of products of the nature described, and have been led to prescribe for their patients substances which sell for a dollar an ounce, but which might be sold at a profit for twenty-five cents an ounce! Here is a "protective tariff" of three-quarters of a dollar an ounce levied on every prescriber, every dispenser, and even consumer, who is foolish enough to employ such preparations.

It is time for medical journals and enlightened physicians to denounce this kind of humbuggery.

The lesson to physicians is that they should resolutely and uncompromisingly taboo every nostrum with whose composition they are not familiar.

THE BICHLORIDE OF GOLD TREATMENT FOR INEBRIETY.

The attitude of the medical press toward the Keely treatment is very properly that of agnosticism. The general opinion seems to be that the Keely cure will go the way of many other much-vaunted specifics, and after the reaction from the stimulating effect of faith will ultimately come the disappointment of relapse.

The so-called cure has brought to public attention the attitude of the medical profession towards doctors who keep secret discoveries made by themselves, or secure patents on such, or otherwise seek to make their discoveries a source of exclusive profit to themselves.

The doctors call this quackery and refuse to have relations with the men who practice it, and for this many persons regard the profession as narrow-minded.

But the doctors are right. It is not in their own but in humanity's interest that they hold each other to this rule of ethics. It is the doctrine of the profession—as old as Galen—that the first duty of the doctor is to humanity, that his learning and his skill belong to mankind, not to himself. Hence it is held to be his obligation to give to the profession, for humanity's benefit, whatever discovery or device he may make tending to the saving of life or the mitigation of suffering.

To this, moreover, every physician upo

graduation makes oath of allegiance, so that the doctor who violates the ethical rule disregards his own oath. Even the pretension of such an one as to his discovery must be taken as that of a man unworthy of confidence.

The rule is a generous, not a narrow-minded one. It has its source in a high and unselfish conception of duty, and its rigid enforcement is a matter of true morality as well as of professional ethics.

As the AGE in a previous issue has already expressed its convictions as to the Keely cure, they need not be reiterated, but as further evidence on this interesting subject it is desired to give the views of some of its well-known contemporaries.

We might well introduce these by a quotation from a New York critic who, commenting on this subject, says:

The death of John F. Mines of alcohol recalls the case of Fitz-Hugh Ludlow, who died of opium. Mines's last work was in celebration of his escape from alcohol by the Dwight method; and Ludlow's last article, entitled "What shall we do to be saved?" told the reader how to escape the opium habit. Poor fellows! Their faith reminds one of that of Marc Cook, who wrote jubilantly that he had cured his consumption in the Adirondacks, and died of consumption about the time the article was printed. "Wh-why d-don't y' g-got' S-smith?" kindly inquired the late Mr. Travers of another stutterer. "H-he c-c-kuk-cured m-m-me."

The editor of the New York Medical Journal, in October 31st issue, says:

The position of Dr. Keely is simply contemptible, unless his "cure" is fradulent and he knows it. If he really believes in it he is guilty of conduct so unprincipled—so utterly wanting in appreciation of the duty he owes to mankind—that it is hard to forgive. If he is a swindler, he is not contemptible, he is positively brilliant in his line.

The editor of the New York Medical Record, under the title of the Collapse of the Gold Cure for Drunkenness, thus voices his sentiments:

Keely possesses no specific, and his treatment is mainly a moral and hypnotic one. We believe most thoroughly in mental and moral therapeutics for the inebriate; but we protest against giving credit of cures by such means to any inert drug or to any other "Something" which is kept as a quackish secret. The charlatan produces wonderful cures for a time, but in the end his work tends to injury and disaster.

The editor of the Medical News says:

People seem never to tire of chicanery and humbug. Mystery and quackery naturally go hand in hand, and the remarkable, almost inexplainable love of humanity for the adept professors of these twain arts will always furnish a plentiful supply of dupes.

Concerning the so-called bichloride-of-gold treatment of drunkenness, it may be suggested that bichloride of gold does not exist in stable solution. Our modern Cagliostro should know that the compounds of chlorine and gold are either the monochloride or the trichloride. He should, therefore, devise a new chemistry, or adopt a proper nomenclature.

The editor of the Journal of the American Medical Association says:

The Keely bubble has burst suddenly in the sight of the whole world, but his decline will not, therefore, or of necessity, be immediate. He may still continue to have a following, more or less noisy and enthusiastic, but his end draws nigh. We have seen just such cases as his, and the history of medicine tells of many others like him, and almost without exception this has been the rule: exposure of fraud eventually brings about its downfall.

T. D. Crothers, M. D., whose special experience in treating inebriety gives his opinion weight, says:

Practically, the bichloride of gold is a therapeutic nihility. So far, the best authorities agree that any form of gold is inferior to iron as a medicine. Any physician can show that a combination of cocaine, strychnine, and atropia, or other similar drugs, used hypodermatically, will effectually check the craze for spirits. As long as it is given two or three times a day, all forms of alcohol will be distasteful, and abandoned under all circumstances. This is simply a chemical restraint, which is well understood in all the insane, inebriate and private asylums of the country. The permanent cure of restoration of these complex insanity cases, in three or more weeks, by chemical restraint, is startling, to say the least.

A PROPOSED NOVEL PREVENTIVE OF SEA SICKNESS.

Under the title of "The Mechanics of Sea Sickness" A. G. Greenhill, F. R. S., communicates to The Engineer some suggestions which he thinks if adopted will lessen the liability to or entirely prevent this hitherto incurable malady.

Mr. Greenhill's description of his method is in brief as follows:

By vaccination we produce an artificial small-pox which wards of the real disease; and similarly, if we can produce mild sea

sickness on shore, it is reasonable to expect that comparative immunity will be secured at sea. By means of a full-sized cross-section of a ship, suspended by the meta-centre, and properly weighted, we can imitate exactly the rolling of a ship, and thus have a swing calculated to produce exactly the same internal sensations.

An ordinary swing is useless for the purpose, as the body is then in the neighborhood of the centre of oscillation, where the disturbing effect is *nil*, or nearly so. It is requisite to have the full-sized ship section, so that we can recede some distance from the centre of oscillation, on the upper decks, and even up on a mast, so as gradually to accustom ourselves to the varying internal sensations.

As a cure is impossible, we must seek for prevention, and this prevention can be attained by a little preliminary practice on land, by mountiug into a swing (*or metacentric cradle*), made to imitate, to full scale, the cross-section of a ship, and made to imitate the rolling by being suspended from the metacentre; here the entry door could be made so that passengers could enter and leave at pleasure.

An hour or two in such a swing, gradually increasing the motion by mounting away from the centre of oscillation, with the knowledge that escape was always possible, Mr. Greenhill thinks, would go far to inure passengers to the real motion of the sea.

THE INTERNATIONAL MEDICAL CONGRESS OF 1893.

This will be held in Rome, and preparations for doing justice to it are already engaging the professional mind of Italy. In what month of the year it will be held is an important question not yet solved.

If held at midsummer or in the early autumn, Rome is not likely to be found attractive to those who dread subtropical heat in a malarious vicinity. If held in the spring or the late autumn, few physicians in active practice will be able to absent themselves from the scene of their work. The last fortnight of September, is what the majority of Italian practitioners suggest as the most convenient time for all parties, and this will most probably be the decision of the Organizing Committee. That committee has just been formed. Dr. Baccelli, at a meeting of the heads of the profession, was nominated president by acclamation. Professor Maragliano, of Genoa, was appointed General Secretary. Presidents of the various sections were next elected. These sections are twelve in number; and, as the results of the various ballots, the following gentlemen were appointed: Anatomy, Professor Antonelli. Physiology, Professors Albini and Albertoni. Pathology, Professors Bizzozero and Foà. Pharmacology, Professor Cervello. Clinical Medicine: Professors Baccelli, Maragliano, Murri, and Bozzolo. Surgery, Professor Bottini. Obstetrics, Professor Morisani. Psychiatry, Professors Morselli and Tamburini. Ophthalmology, Professors Devincenzi and Secondi. Dermo-Syphilopathy, Professors Campana and Barduzzi. Forensic Medicine, Professor Tamapia. Hygiene, Professors Pagliani, Celli, and Canalis. No one who even cursorily follows the progress of theoretical and practical medicine in Italy can fail to recognize in these names the representatives of enlightened science and broad professional sympathies, who will spare no effort to make the eleventh International Congress a conspicuous advance on its predeecessors. The importance attached to this great medical parliament is already apparent, in the number of physicians and surgeons (mainly continental and transatlantic) who have intimated their intention to assist.

ARTIFICIAL CORNEA.

The Berlin Klin. Wochenschrift publishes a seventh case of transplantation of cornea by Professor V. Hippel of Königsberg. Cocaine applied, the non-transparent part of the cornea down to the membrane of Descemet was cut by a little trephine, and carefully removed. By the same means a similar piece was excised from the whole thickness of the cornea in a young rabbit, and transplanted to the eye of the patient. It filled the wound, and was on a level with the rest of the cornea. Iodoform was applied, and both eyes were bandaged. In six weeks the patient was discharged with a completely transparent cornea.

Book Notices.

MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry—A Text Book Specially Adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M. D. Third Edition. Thoroughly Revised. With forty-four illustrations and seven colored plates, representing fifty-six chemical reactions. Lea Bro.'s & Co., Philadelphia. 1891.

A third edition of this manual having been called for, the author has gladly availed himself of the opportunity to make such alterations and additions as are necessitated by the progress of science, and it has been his aim to make the work more than ever useful as a text-book for the medical and pharmaceutical student.

The plates showing the various shaded colors of chemicals and their reactions, have been reproduced for this one.

The material has been divided into seven parts which include material selected to give a fundamental grasp of the whole science. In the first, the fundamental properties of matter are considered briefly and so far as is necessary for an understanding of chemical phenomena.

The second part treats of those principles of chemistry which are the foundation of the science, and enters briefly into a discussion of theoretical views regarding the atomic constitution of matter.

The third and fourth parts are devoted to the consideration of the non-metallic and metallic elements and their compounds. The old classification of metals and non-metals, organic and inorganic compounds, has been adhered to for the reason that the author believes it to be the best adapted for purposes of instructiug beginners in chemistry.

For the special benefit of pharmaceutical and medical students all chemicals mentioned in the United States Pharmacopœia are included, and when of sufficient interest are fully considered.

The fifth part is devoted to analytical chemistry and will serve the student as a guide in his laboratory work. While qualitative methods are chiefly considered, a chapter is also added giving the principal methods for volumetric determinations.

The sixth treats of organic chemistry.

The seventh and last part, giving some of the more important facts of physiological chemistry, was prepared for the benefit of the medical student, and in the hope that it may serve as a guide to others who extend their studies to this very interesting branch of the science.

As an assistance in the laboratory, a number of experiments have been added, which may readily be performed by students with a comparatively small outfit of chemical apparatus.

SCRIBNER'S MAGAZINE FOR 1892.

The year 1891 has been marked by a greater advance than any similar period since the Magazine was established. Not only has the literary and artistic excellence been maintained and increased, but a corresponding gain has been made in the sale and influence of the Magazine. At the end of 1891 the circulation has risen to more than 140,000. It may justly be promised that the further improvements for the coming year will be proportionate to these largely increased opportunities.

It is not possible to give, in a brief space, an account of all the features in preparation for next year, but the material is deficient in neither importance nor range of subject.

It is proposed to publish a series of articles, upon a scale not before attempted, giving the results of special study and work among the poor of the great cities. The plan will include an account of the conditions of life in those cities (in many lands) where the results of research will be helpful for purposes of comparison as well as for their own intrinsic interest. While, from a scientific point of view, the articles will be a contribution of great importance, the treatment will be thoroughly popular, and the elaborate illustrations will serve to make the presentation of the subject vivid as well as picturesque.

Unpublished Reminiscences and Letters of Washington Allston, foremost among early American painters, will appear, and a number of illustrations will lend additional interest to the articles.

The aim of a series of very short articles

on Important Moments, will be to describe the signal occasions when some decisive event took place, or when some great experiment was first shown to be successful—such moments as that of the first use of the Atlantic cable, the first use of the telegraph and telephone, the first successful experiment with ether, the night of the Chicago fire, the scene at the moment of the vote on the impeachment of Andrew Johnson, etc., etc.

In the early spring will be begun a number of seasonable out door papers, among them being:

Small Country Places, how to lay out and beautify them, by Samuel Parsons, Jr.:

Fishing Lore from an Angler's Note-Book, by Dr. Leroy M. Yale:

Mountain Station Life in New Zealand, by Sidney Dickinson:

Racing in Australia, by Sidney Dickinson, with illustrations by Birge Harrison.

All Around the Year, 1892. Entirely new design in colors, by J. Pauline Sunter. Printed on heavy cardboard, gilt edges, with chain, tassels, and ring. Size 4¼ by 5½ inches. Boxed. Price, 50 cents.

This most charming calendar is composed of heavy, gilt-edged cards, tastily tied with white silk cord, and a delicate, silvered chain attached, by which they may be hung on the wall or elsewhere, and are so arranged on rings that they may be turned over as each month shall be needed for reference.

As fresh in design—even outshining its brilliant host of predecessors, which have been sent out each year to the calendar-loving world—as it is fresh in the fair whiteness and the soft delicacy of its workmanship. Each card contains not only the calendar but a design both charming and appropriate, and an equally timely sentiment. It is a study for an artist—in fact twelve studies in art, of original and beautiful designs, and worked out in the highest style of the printer's art. The drawings are in Mrs. Sunter's picturesque style and executed in sepia tint and color,—so quaint and bright and sweet that one is charmed with them.

Altogether, it is a charming piece of work, a thorough pleasure to the eye, and sure to win a welcome wherever it goes.

They are of convenient size, and in their neat boxes, take the lead among the calendars of the season. As a holiday gift, there is none prettier or daintier, equally suitable for the library and office, or "my lady's chamber."

Wood's Medical Monographs. October, 1891. Vol xii, No. 1. Treatment of Diseases of Women, by Thure Brandt. The Modern Treatment of the Morphine Habit, by Dr. A. Fromme. A Contribution to the Study of So-Called Scarlatina Puerperalis, by Prof. Renvers. The Influence of Alcohol upon the Organism of the Child—A Pharmacological-Clinical Study, by Prof. R. Demme. The Diseases of Development, by Dr. J. Comby. Wm. Wood & Co., New York.

Brandt presents his gymnastic treatment of female pelvic diseases, and, in detail the application of this method of treatment to uterine displacements, changes in form and tissue of the uterus, inflammatory conditions, new growths, inflammations and exudations of various kinds.

Dr. Fromme considers judicially the sudden, modified-rapid and slow cures of the morphine habit.

Dr. Comby narrates many cases of anomalies of development and their manifestations, and gives his views as to prophylaxis and treatment.

A Text-Book of Physiology. By M. Foster, M.A., M.D, LL.D., F.R.S. Fourth American from the fifth English edition. Thoroughly revised, with notes, additions, and two hundred and eighty-two illustrations. 1072 pages. Lea Bros. & Co., Philadelphia.

To this latest edition of this classical text-book many additions have been made, and a more prominent place given to histology as a basis for more intelligent study of physiological problems.

The work comprises four books, in which are considered with exceeding thoroughness and perspicuity The Blood, The Tissues of Movement, the Vascular Mechanism, The Tissues of Chemical Action with their Respective Mechanism, Nutrition, The Central Nervous System and Its Instruments, The Tissues and Mechanism of Reproduction.

The American editor has adapted the work to the wants of the American student, adding references to the physiological action of some of the more important new drugs, and

elucidated the text by further illustrations. Every page shows the author to be in touch with the latest definite conclusions from physiological research.

THE PHYSICIANS' PERFECT CALL LIST. By G. Archie Stockwell, M.D., F.Z.S. Flexible morocco, long 16mo.; pp. 200. Price, $1.50. Published by Geo. S. Davis, Detroit.

In size and shape, this is by long odds the most convenient and best of all the "Visiting List" series. A prominent feature is the absence of all "deadwood" and advertisements, and the extremely convenient and practical arrangement of most practical contents. The information demanded for ready reference are upon the inside of covers or on fly-leaves. The posological table, too, is a new departure that cannot fail to commend itself, being very thorough and complete, newly revised and embracing the very latest, (including the non-officinal), remedies introduced. Especially commendable is the obstetrical table, in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, losses, etc. Paper and binding are alike superb.

BERND'S PHYSICIAN'S REGISTER. Henry Bernd & Co.: St. Louis, Mo.

One of the troubles of the medical practitioner's life is the keeping of books. Anything that minimizes his difficulties in this respect is therefore to be welcomed. One of the most novel and successful attempts in this direction is Bernd's Physician's Register, in which the visiting list and ledger are combined. By a very neat arrangement the patient's name requires to be written once for the year, while the visit for every day and to each member of the family is noted separately. These visits are summed up at the end of each month, and accounts may be rendered monthly, quarterly, half-yearly, or yearly, as desired. The register is in two forms: one for the pocket, the other for the office or surger. Of the latter there are three sizes, for 500,800 and 1,200 accounts respectively, and of the former two for 300 and 400 each. They are excellent specimens of American stationery, and reduce the labor of book-keeping to its minimum. In addition to the visiting list there are several blank pages for various memoranda.

Notes and News.

The Influence of Grave-yards on Public Health.—

Dr. J. W. Carhart, of Lampasas, Texas, has written a paper on this subject in which he drew the following conclusions:

From whatever standpoint this subject was approached, it must be with care and gentleness, since the grave-yard, though a constant menace to public health, had a pseudo-sacredness fostered by the profoundest sentiment of our nature.

The method of the disposal of the dead should be founded on reason and not on custom or sentiment.

The interment of the dead in the earth was never enforced by a statute, Jewish or Christian, and was merely incidental to both dispensations.

No law, human or divine, requires us to dispose of the dead in a manner prejudicial to the health and comfort of the living.

While it might be an open question as to the right of the State to decide as to the manner of the disposal of the dead, unless in exceptional cases, it was clearly the province and duty of the State to prevent such disposal as would in any wise jeopardize the interests of the living.

From all the facts at our command, we were led to the conclusion that the grave-yard should become a thing of the past, and that incineration was the method most in accordance with science, sanitation, æsthetics, reason, and religion.

He would add, as a corollary to these several conclusions, that, since the intelligent, broad-minded physician was the almost exclusive guardian of public health in seeking to prevent the development and spread of disease, it was plainly his duty, when cemeteries were being located, to use his best endeavors to have them so placed as to jeopardize as little as possible the public health; and for its moral effect he should encourage efforts to beautify existing cemeteries; and that he should seek, as fast as possible, without too much violence to the tender sensibilities of the masses, to encourage incineration of the dead, or some other method more in harmony with sanitary science than the common modes now practiced.

A. D. 2000.—

Like Bellamy's hero, I overdosed
With some seductive drug,
And snoozed for more than a century
Buried in cellar snug;
Till an *ex post facto* Doctor man
Into my quarters dug,
And injected some hypnotic germs
From a medical humbug.

He brushed off the dust of an hundred years,
And gave me a cordial strong;
"From all your surroundings it appears
That you must have laid here long;
You're clad in XIXth Century gear
If my judgment is not wrong;
'Tis well *I* found you; for my compeers
Would have roasted you ere long.

"'You see, we're working an arsenic mine.
In the graveyards of Boston town;
The corpses are solid with metal fine,
And we reduce it down.
So solid it is that they often shine
With crystals red, green and brown—
Arsenic from sternum through to spine,
From ossa calces to crown.

"'Our histories tell, that, in days of yore,
The populace all fell sick
With illnesses which the doctors swore,
Were due to arsenic.
Their glands, in a fashion unknown before,
Absorbed the poison quick;
From papered wall and carpeted floor,
They got it 'fast and thick.'

"'From fabrics yellow, red, green or blue;
From clothing and furniture plush;
From whatever possessed a brilliant hue,
Not excepting a maiden's blush;
From the soot and smoke of the chimney flue;
From plain old Puritan mush;
From legumes, roots, tubers and canned goods, too;
From the fruit of vine and bush.

"'For all of the neignboring country through
The farmers could be seen
Besprinkling whatever crop they grew
With deadly Paris-green;
It would kill the potato-bug, they knew,
Far better than kerosene,--
Gipsey-moths and flies and rose-bugs, too;
It killed them all off clean.

"'The dust which was stirred by wind and snn
Bore to town a fresh supply,
And market men brought it in by the ton
For their customers to buy.
No wonder the mischief by arsenic done
Caused a great mortality'"—
Here he paused and winked. "You know, my son,
There's arsenic in every *dye*."

—C.E.F., in *Boston Med. and Surg. Jour.*

Gynæcologists and Happy Homes.—

The following is the interesting preliminary "whereas" of a series of resolutions advocating the organization of a new gynæcological and surgical society:

"*Whereas*, The happiest of our homes and the welfare and perpetuity of future generations depend upon the physical as well as the moral status of women."

After some further whereases the following resolution was adopted:

"*Resolved*, That we, the undersigned physicians, do hereby pledge our hearty cooperation and personal support in the organization and perpetuation of a society to be known as the 'Western Association of Obstetricians and Gynæcologists.'

"*Resolved*, That the members of this Association shall consist of such members of the profession (regular) who are giving special attention to the practice of obstetrics and gynæcology, who reside in the following States and Territories, to wit: The Missouri River cities of Iowa and Missouri; the States of Kansas, Nebraska, and Colorado; New Mexico, Indian Territory, and Oklahoma.

"*Resolved*, That the meeting for the organization of this Association shall be held in the club-room of the Copeland Hotel, in Topeka, Kan., Tuesday, December 29th, 1891, at 3 P.M."—*N. Y. Med. Record.*

The Loofah as an Aseptic Scrubbing-Brush.—

John B. Roberts, Professor of Surgery in the Woman's Medical College, Philadelphia, writes the Medical News as follows:

The desire of surgeons to obtain a clean brush for scrubbing the skin before operations, in order to remove accumulations of epithelium and bacteria, makes a cheap article a desideratum.

I think that small pieces of the Egyptian loofah, which is found in all drug-stores for use in the bath-room, meet the indications admirably. For a number of years I have used pieces of this material for cleansing the skin before operations. A single loofah costs about ten cents and is large enough to be cut into ten or a dozen pieces. After use these pieces may be thrown away, as the cost is rather less than a cent each.

I usually carry in my operating-case three or four pieces of loofah for scrubbing pa-

tients. It comes compressed like sponges, and a piece cut off before the loofah has been soaked in fluid can be carried in a small compass in an operating-case. For hospital use pieces of loofah can be kept soaking in sublimate solution until used and then thrown away, or soaked again, as the more expensive nail-brushes are treated.

When is a Sea Voyage Appropriate?—

The Sanitarian offers the following advice on the subject:

Never send a patient to sea who is compelled to live on a limited diet, unless he can take the requisite food along with him, a ship being the poorest place in the world where to obtain any special article of diet. More ground will be lost by patients under such circumstances, in one week, than can possibly be regained in many months following, on shore, even under the most favorable conditions. There cannot be the slightest doubt in the world that a sea voyage may be, and is, beneficial in a great majority of chronic cases, but it should be a voyage chosen for its especial adaptability to the case in question, and the climate, class of steamers, food, etc., should have the careful consideration of the family physician before he sends his patient on a month's voyage by water, for a lack of information on the physician's part may mean no improvement to the patient, and may mean death, whereas positive knowledge would insure improvement.

The Bacillus of Chorea.—

Berkley (Johns Hopkins Hospital Reports, Vol. II, No. 6) reports one case of chorea insaniens in a woman and of ordinary chorea in a dog in which he has made most careful post-mortem examinations. He concludes his paper with these remarks: "It would seem that chorea might be considered as a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in a special bacillus or its toxical product, not a coccus, the staphylococcus aniens being only an accompaniment to the other germ, as in many other infectious diseases. The so-called "choreakörperchen" of Flechsig and Wollenberg are, so far as the reporter is able to judge from the first writer's description, by no means peculiar to chorea. They are to be found not only in the globus pallidus, but in other parts of the brain, not only in this affection, but also in normal as well as diseased brains.

The Proclivity of Women to Cancerous Disease.

Dr. Snow says that the number of women who apply at the Cancer Hospital is twice as great as that of the men, and this notwithstanding that the cases of cancer of the lip and tongue are almost all males. This excess of females is due to the prevalence of malignant disease of the uterus and mamma. He then asks why these organs should be so frequently attacked. His answer seems to be threefold: First, these organs are rich in cell-elements. Second, they are frequently exposed to irritation. Third, their normal condition and nutrition are interfered with by circumstances which he considers are more or less directly the result of what is called civilized life. Of these he specially blames constipation, over-pressure at school, the abuse of tea, and tight-lacing.—*Medical Record.*

The Determination of Sex.—

Wilson (Lancet, September 26th, 1891) proposes a theory that makes sex mainly dependent upon the nutritive perfection of the ovum at the time of impregnation. He holds menstruation and ovulation as practically a single process. When impregnation occurs in anticipation of menstruation, the product of conception is likely to be a male; when impregnation takes place subsequently to menstruation, the product of conception is likely to be a female—in other words, the earlier after ovulation that impregnation takes place, the greater the probability of the product of conception being a male, and, conversely, the later that impregnation follows ovulation, the greater the probability of the product of conception being a female.

An Attempt to Render Tobacco Harmless.—

Smokers may be pleased to learn that Dr. Gautrelet, of Vinchy, claims to have discovered a method of rendering tobacco harmless to mouth, heart, and nerves, without detriment to its aroma. According to him, a

piece of cotton wool steeped in a solution (5 to 10 per cent.) of pyrogallic acid, inserted in the pipe or cigar-holder, will neutralize any possible effects of the nicotine. In this way not only may the generally admitted evils of smoking be prevented, but cirrhosis of the liver, which in Dr. Gautrelet's experience is sometimes caused by tobacco, and such lighter penalties of over-indulgence as headache and furring of the tongue, may be avoided. Citric acid, which was recommended by Vigier for the same purpose, has the serious disadvantage of spoiling the taste of the tobacco.—*Science.*

The Georgia Bill to Prevent Drunkenness Among Physicians.—

This bill, which has excited much adverse criticism, has been vetoed by the Governor of Georgia. While drunkenness is to be condemned, and suppressed if practicable, no class legislation such as this should ever be tolerated by any sensible legislature.

A Venereal Congress.—

A project is now under discussion by different boards of the Paris municipal government to establish an International Congress to consider questions connected with prostitution and the limitation of venereal diseases. It is proposed to hold the Congress in Paris, in 1893, and to invite medical men, lawyers, sanitary officials, and political economists.

In Memoriam: Dr. Fordyce Barker and Dr. Abram DuBois.

The New York Academy of Medicine devoted the entire evening of Nov. 5th to the memory of ex-President Dr. Fordyce Barker, and of its first benefactor, Dr. Abram DuBois. The eulogies were read by Drs. W. T. Lusk and A. B. Ball.

Doctors Have the Right of Way.

An ordinance has recently gone into effect in Berlin which will give the right of way to carriages of physicians driving through crowded streets. In order to distinguish doctors' carriages from others, the coachmen will wear white hats.

Therapeutic Brevities.

The Antiseptic Action of Salol.—As the results of a series of experiments with salol, Dr. F. Papuli arrives at the following conclusions:

Salol has pronounced antiseptic properties, especially against certain micro-organisms. Its antiseptic action is due to its decomposition, which is produced by the micro-organisms themselves. All micro-organisms decompose it, but those which decompose it the most actively lose their vitality, while those which only partly act upon it become attenuated, and, finally, those which influence it but slightly remain active.

Finally, salol has an important influence upon suppuration. Although this was well known in medical practice, as, for example, in cystitis and pyelitis, as well as in surgery, these experiments would seem to present a clear explanation of its favorable action. While all the writers in their publications speak in general of an antiseptic action, and Gratzer of a detersive and exsiccating influence, from experiments, one comes to the conclusion that the antiseptic action of salol upon suppuration consists in the property which pyogenic micro-organisms have in decomposing it and remaining inactive after its decomposition. Its action upon the surfaces of wounds may be considered as double; the salol in the inferior stratum decomposes and renders the cause of suppuration powerless; while, in the superior, salol being like iodoform insoluble, it protects the wound from external agents, remains unaltered in the secretions of the wound, while those secretions which contain micro-organisms are disinfected.—*Annals of Surgery.*

Camphor-Menthol in Catarrhal Diseases.—Dr. Seth S. Bishop, of Chicago, in a paper thus entitled, reported a large number of cases of naso-pharyngeal catarrh, hay fever, and diseases of the ear, as having been treated with camphor-menthol with much better results than menthol alone produced. The presence of the camphor appeared to intensify the action of menthol.

A number of hay fever sufferers, among them the President of the United States Hay Fever Association, had obtained greater relief from this inhalant than from any other they had ever tried. This effect of camphor-menthol in reducing turgescence and consequent tumefaction of the turbinated bodies, had rendered a contemplated operation for stenosis unnecessary in several cases cited.

Injections of a ten-per-cent. solution in lanolin into constricted Eustachian tubes had caused them to become patulous. The improved ventilation of the middle ear thus effected, together with inflation with a five-per-cent. or ten-per-cent. spray of the same liquid in hypertrophic tympanic catarrh, increased the hearing and produced a sense of clearness and comfort in the head.

Camphor-menthol contracted the capillary blood-vessels of the mucous membrane, reduced swelling, relieved pain and fullness of the head, or stenosis, arrested sneezing, checked excessive discharges, and corrected perverted secretions.—*N. Y. Med. Jour.*

The Treatment of Vaginismus with Galvanism.—Lomer reports two cases of vaginismus in married women, whose ages were twenty-two and twenty-seven, in which the Galvanic current was used successfully. The negative electrode, consisting of a rectangular plate seven by fifteen centimeters in size, was applied to the abdomen, and the positive, a rounded cylinder five centimeters in diameter, was applied upon the peritoneum at the entrance of the vagina. The current was first applied every two days, then every day, and then every week, each séance lasting four or five minutes. The current used was of weak intensity, and after a few applications the spasms of the vulvar sphincter gradually became less violent. Then the vaginal entrance became less and less sensitive, until at length sexual intercourse became possible for the first time in years. In both cases the vaginismus was complicated with dysmenorrhœa, and the latter symptom was also relieved by the electricity. At the beginning of the treatment the current could be tolerated in greater strength than subsequently, when the vaginismus had been relieved. The conclusion from this fact is that convulsive affections of this character are complicated with diminution of Galvanic excitability.—*Jour. de Méd.*

Deodorization of Iodoform by the Use of Creolin.—Vazci (Rundshau, and Virginia Medical Monthly, 1891) reports the following interesting case: A patient was given, for a bone felon, a salve consisting of two parts of iodoform, one of creolin, and twenty-five of vaselin. On next day the author was surprised to find that the ointment not only had acquired a different color, but had also lost *all odor* of iodoform. Creolin is not only a non-irritating deodorizer, unlike many other similar drugs, but is likewise a good disinfectant.

Medical Progress.

COCILLAÑA.*—Among the newly-introduced plants of our modern materia medica, there is none to which I can refer with more safety, and lay greater stress upon in calling the attention of the profession, than referring to the high value of the so-called cocillaña; and of the few remedies that are brought to the attention of our therapeutists, none has held up its estimation equally as well, to my mind, as the preparations of this worthy drug. During the past two years, my attention was first called to give this remedy my most careful consideration, and, having had some very carefully prepared fluid extracts placed at my disposal, I was very anxious to try their merits both physiologically and therapeutically, and, in order to do so, every effort and opportunity was embraced to select such cases wherein the value and virtues of these preparations could be thoroughly tried and tested. As the bark and its preparations are but little known to most of our medical men, it will most likely be just to point out some of the specific characters as well as the botanical history.

The source of this drug consists in the bark of an undescribed, yet, no doubt, a very well authenticated species of the genus Guarea. The plant was first brought into special notice in the year 1886, and was found to inhabit the region near the junction of the rivers Beni and Madre de Dios; also about La Paz, Bolivia, by my friend, Dr. H. H. Rusby, who, then traveling with the view of obtaining botanical and medicinal plants, brought this with his valuable collections to the botanical department of Columbia College, of New York. Here an attempt at identifying the species was made, and the conclusions were then partially arrived at, that the species belonged to the Anacardiaceæ, or, as better known, the order to which our Rhus genus properly belongs. After more careful study of the fruit, however, which was amply represented, better in fact than the inflorescence, it was decided that it was not an Anacardiaceous plant, but more strictly allied to the Meliaceæ. Hence, it now occupies its place under that genus, and for the want of better identity is considered one of the Guareas; but to what species to refer it remains a question of considerable doubt, owing to the want of proper nomenclature on this little-known genus, as well as the minute and microscopic differences of

*John W. Eckfeldt, M. D., Lecturer on Therapeutics, Medico-Chirurgical College, Philadelphia, in Philadelphia Medical Bulletin.

the flowers which exist, rendering it a tedious undertaking to base a clear diagnosis. The nearest conclusion in bringing this species to some shape is that suggested by Professor Britton, of Columbia College, who very justly asserts that the plant is *Guarea trichilioides*, or a neighboring genus, Sycocarpus, dedicating it to its discoverer as *Sycocarpus rusbyi*.

The tree is a large one, attaining a considerable height, averaging from thirty to forty feet, with spreading branches and a trunk measuring two to three feet in diameter. The bark is rough in the older trees, of considerable thickness, and has an ashy or gray color. The branches are inclined to assume the horizontal state, attaining a more erect angle, and are clustered with terminal leaves. The form of the leaves is properly pinnate, and they are likened to those of the sumach, but larger and longer, often reaching a foot or more in length and about six inches in breadth, and having from four to eight and even ten pairs of ellipsoid or obtuse leaflets, frequently measuring five inches in length.

The flowers, which are borne on racemes, appear in the axils of the leaves, which vary considerably also in length. They are dull, greenish, small, and clustered, and somewhat sessile, with the sepals and petals in fours, stamens eight, and pistil one. The ovary is four-celled, tomentose, and cyathiform, ranging in size to that of a walnut, broad and flat at the top, and narrowing proportionately toward the attachment. Seeds three, adherent to the lateral aspect of the placental walls. The specimens of bark that were studied by me were coarse, of an ashy color, and encrusted with various forms of lichenose vegetation, upon which much of the varied color depended. The color of the inner bark-fibres was pale, and they were loosely fibrous in fracture, which is rough and spiculose. Microscopically, large sclerenchymose cells are clearly demonstrated. These diminish or nearly disappear toward the under structure, and in the bast portions they are only limitedly seen. In many other barks the bast cells are arranged in elongated series, which are only to be distinguished in this bark in transverse sections; in other terms, they are arranged in a tangential manner. Chemically, this bark has received only a passing examination. From my investigations, I am led to believe that there is no special alkaloid which can be isolated in a crystalline state, but that there is a glucoside body which is held in connection with certain resinoid and oily principles, which does not reveal, by any of the alkalies, alcohol, or chloroform, any special peculiar substance. From an evaporated, concentrated, chloroformic solution, a tenaceous, gummy, resinous matter was left, having all the peculiarities of the bark, both in taste and smell. Tho odor of this principle is peculiar, and I can compare it to no other bark. The taste is bitter, mawkish, somewhat astringent, and notably aromatic, not unlike that of serpentaria or asarum.

Physiologically, this drug will demand a closer study than what I have attempted to give it, clearly suggesting that it will have the power of exerting considerable energy, if given in too large quantities. From observations, I have drawn my conclusions that the drug is a very active emeto-cathartic, and is closely allied to ipecacuanha. In its native country the plant is used as an emetic, and also as a cathartic; whilst no attributes are credited to it for other indications. Esteemed as this remedy is, the natives are usually accustomed to resort to the bark for such requirements necessarily demanded by their systems, when, having indulged in irregular diet, and often scantily fed for some time, when favored by a more bounteous supply gorging themselves, necessitating active relief by some remedy which they freely have at their command. Unlike ipecacuanha, cocillaña does not seem to have any tendency to excite any erythematous or pustular eruption or exudation, when applied or rubbed on the cutaneous surface. Administered by the stomach, from 30 to 60 grains, cocillaña acts as an emetic, followed after the lapse of a few hours by catharsis. If given in too large doses or overdoses, the drug has the power of exciting very violent gastro-intestinal irritation, and, in some instances, as reported, death has resulted. Being preceded by active emesis, with purging, the depression, which was very noticeable, was accompanied by feeble heart, a tendency to short and accelerated respiratory movements, with general relaxation of the capillaries, producing a copious transpiration. As an emetic, its action is not slow, but more rapid than that of ipecacuanha, the time required not averaging, in some cases, over fifteen minutes. In moderate and repeated doses, tolerance of the drug is not manifested, when emesis does not promptly ensue. Cocillaña, when administered in modern doses—from 30 to 40 minims of the fluid extract, at intervals of two to four hours,—acts directly upon the broncho-pulmonary mucous membranes. It has the power of stimulating that surface, promoting a free and abundant secretion, causing the

mucous to be more easily eliminated. The effect upon the cough is palliating, rendering a harsh and harassing effort at expectoration easy and mild. As a stimulant in bronchitis and pneumonia, I have had no remedy at hand in which I could trust so confidently, it even surpassing ipecacuanha and senega. This remedy, in my opinion, is better suited to the more tedious forms of pneumonia, in that class of cases which are more stubborn, and do not yield promptly to the general treatment of pneumonia. In the young, as well as the aged, cocillaña acts with the same precision, rendering very satisfactory results. Cocillaña is, therefore, a decided stimulant to the capillaries, confirming its expectorant qualities, as well as the tonic action, to the whole respiratory tract. In small doses cocillaña does not retard the action of the stomach, but, on the contrary, adds largely to its tone, thereby improving the appetite and favoring digestion. In certain forms of atonic dyspepsia, I have found that it acts very favorably, when combined with other synergistic remedies. From prolonged use, the mouth and fauces become dry and intensely reddened, leaving a metallic taste, which kindly subsides as the other physiological effects pass away. On the bowels the action of cocillaña is frequently retarded, owing, I judge, to certain idiosyncrasies of the individual. As a rule, the drug, when administered, proves to be efficacious as a purgative in from two to four hours, in moderate quantities of the powdered bark, and 20 to 40 grains will cause a free and easy movement, without any special symptoms, except some degree of tenesmus, giving rise to no pain whatever. The character of the alvine discharges is mucous, and they contain considerable bile. As a cathartic it can be commended, but must be used with discretion. Upon the skin transpiration is increased, but in larger doses very copious sweating, with some prostration, ensues.

I should not class this remedy with the antipyretics, as no perceptible reduction of temperature was apparent. Upon the heart the effect is somewhat depressing, with little effect upon its force. It does not seem to have any diuretic action, but imparts an odor to the urine peculiar to the drug itself. Upon the nervous system, but more particularly the cerebrum, it occasions slight dizziness; but I have attributed this solely to sympathetic influences, from its action on the stomach, no cerebral pain occurring, but a feeling of lassitude is produced.

The principal uses in which I have found this remedy to exert its most important influences are as follows: As a local application used in the form of a spray, of a diluted solution made from a fluid extract, in acute coryza; and, in the more chronic stages, beneficial results are plainly recognized. In hay asthma, some passive results were obtained. The same impressions are likewise secured by the repeated administration of small doses, by which means the entire mucous tract is easily reached. In spasmodic laryngitis of children, carrying the dose to the point of nausea will be found not to be transient, but permanent, in the results. The most inspiring uses for this drug, however, are in bronchitis, and more particularly in the secondary stage of pneumonia. The therapeutic reports of such cases—as I have freely extended its uses—are numerous, and I am gratified to state, with much authenticity, that I have had the most promising behavior in its use in all conditions of bronchopulmonary diseases wherein the drug has been used, and, without exception, save slight nausea, I had no cause to regret the administration of this new and valuable remedy.

Without going into further details, taking up the consideration of my clinical study of all cases that have been carefully noted, I can simply say that the results in all the cases were apparently about the same. I can, therefore, with good judgment, heartily indorse the drug as being one of the finest acquisitions to modern materia medica. The only preparation now obtainable is the fluid extract, which is manufactured by one of our leading pharmaceutical firms. The color of the preparation is like that of sherry wine, having a somewhat heavy, aromatic odor, and a persistent, bitter taste, imparting an agreeable flavor to the syrup with which it is combined. The usual dose is from 30 to 40 or 60 minims, given at intervals of from two to four hours, as the nature of the case may require.

REPORT ON THE CURE OF TUBERCULOSIS WITH CREASOTE.*—While in my first study (1887) "on the treatment of tuberculosis of the lungs with creasote"—after nine years employment with thousands of patients of a dose of ½ gramme per diem at the most, at that time the maximal dose of the Pharmacopœia—I had reached the conclusion: "I am by all means decidedly inclined to believe that we can cure with creasote sufferers in the initial stages of lung-tuberculosis; but this must not be considered the chief substance

* Dr. Julius Summerbrodt, Professor at the University of Breslau. Translated by Joseph Helfman, Detroit.

of my report, but rather that many, many tuberculous patients may be greatly helped by the employment of creasote, for that I know, that I can guarantee," I was in position in February, 1891, in my treatise "on the substitution and completion of the Koch treatment of lung tuberculosis, with my creasote treatment," *first to prove positively that by means of large doses of creasote (1–2 grammes per diem) not only initial but also longer-seated and severer forms may be completely and permanently cured*, and I regarded as specially important my ability to state that of the 17 cures first reported, 8 were achieved with patients who were laboring under more or less dangerous hereditary burdens.

If I now select and report a number of observations, from the series of cases which I have been treating since February of this year, for tuberculosis of the lungs and larynx, I do it—in a measure, for the purpose of completing my February report—*in order to produce evidence of the relatively rapid curative action of my creasote treatment in the initial stages of the disease*, and to show, on the other hand, what may be achieved by this treatment even under apparently desperate conditions.

Far from believing that every case will thus derive benefit, I must, however, express my conviction, based on practical experience, that creasote in large doses (1–4 grammes per diem) *is for countless sufferers an excellent remedy, thus far unequalled by any other, for tuberculosis of the lungs*, and in view of the theoretical disregard of this substance as a remedy for consumption, on the basis of meagre, negative experiments on animals, I must quote one of Kirchhoff's expressions: "When Theory and Practice disagree, Practice is always in the right."

With respect to the dosage of the remedy, I wrote as early as 1887: "The more creasote can be born per diem, the better the effect." Unfortunately I then held it wrong to exceed the maximal dose of ½ gramme allowed by the Pharmacopœia. The latter now permits at least 1 gramme per diem as a maximum dose, but even this is beyond question too little. I must urge upon my colleagues that they absolutely disregard the Pharmacopœia, and employ with patients more than ten years old an initial and minimal dose of 1 gramme per diem, and to exceed this dose considerably and frequently (up to 4 grammes) if they would have complete success.

I am glad to assume responsibility for this counsel, inasmuch as during four years I have not only failed to observe any injury to result from ignoring the Pharmacopœial limitations, but it was only by exceeding the authorized dosage that creasote has become a real remedy for tuberculosis.

In order to avoid repetitions, I state beforehand that all the following patients employed exclusively capsules of 0.1 creasote (with cod-liver oil). No one received any other medicament at the same time.

[The author at this point gives a tolerably circumstantial account of twelve cases, all presenting marked tuberculous symptoms. The first nine were of a milder type, and treatment, having been commenced early in the course of the disease, proved completely satisfactory. The remainder—three severe and advanced cases—were very successfully treated, the patients declaring that they were again perfectly well. Prolonged employment of the creasote capsules was, however, enjoined. In cases 1–3 and 5–9, calculating from the beginning of treatment, there were no signs of lung disease to be observed; 6 times after 1, 2, 3 or 4 months, twice after 6 or 7 months; in case 4 nothing after 3 months. All these patients should continue the daily use of 1 gramme creasote at least half a year longer, with the exception of the first.

Of the 12 sufferers here mentioned, 5 were predisposed from heredity; in 3 of all the patients, tuberculous laryngeal disease was evidently cured.]

The medical literature of this year thus far contains but little respecting the treatment of tuberculosis with creasote, nevertheless some things worthy of note have been published. Thus *Nathan*, of Berlin, has reported a series of very good results from the employment of large doses of creasote. *Seé*, of Paris, has commended the treatment of pulmonary tuberculosis by adding creasote vapors to currents of air slightly compressed and inspired 4 hours a day in the pneumatic cabinet. *Tappert*, of Paris, also praised this method. *Grasset*, of Paris, has reported that he treats tuberculosis at his station almost exclusively with large doses of creasote, thus obtaining the best results. Here should be mentioned also the very important publications of Schüller, of Berlin, who has had particular success in surgical tuberculosis through combination of surgical procedures with the internal administration of guaiacol (the chief constituent of creasote).

[The author cites a case reported by Flück in the Dent. med. Wochenschr., in which creasote proved of great service after Koch's "tuberculin" had failed of effect.]

As stated above all the preceding cases were treated with capsules of 0.1 creasote each, and cod-liver oil, whilst formerly I gave, especially where there was abundant bronchial secretion, creasote with balsam

tolu. I have discontinued the use of this combination since discovering that the tolu passes out with the fæcal matter, bearing with it considerable creasote. The dosage of the creasote is thus bereft of accuracy. Similar objections apply to the administration of creasote in pill form, aside from the material loss of creasote due to evaporation during storage of the pills. The best form for the administration of creasote still continues to be the gelatin capsule, as under gelatin investment, the proportion of creasote is a constant one. The creasote pills offered by various houses are indeed cheap, but very insoluble, and often pass out into the stools unaffected. The admixture of magnesia is said to be the cause of the hardening, by a chemist in the Pharm. Centralzeitung.

In view of all these things, I consider the most desirable form of administering creasote to be the capsule, adding a readily absorbable fat, for example, cod-liver or olive oil.

I have often been asked, especially this year, whether I did not employ guaiacol, the chief constituent of creasote (60–70 per cent). I have answered in the negative, for the following reasons: In the first place, I do not know whether the action of creasote and guaiacol is identical, and in view of the fact that, for example, an infusion of digitalis is by no means of the same value as digitalin, I could not take anything for granted in this case. Secondly, I should be obliged to give up with at least some of my patients the use of creasote, which I have tested for 13 years, and found most serviceable, and devote years to experimentation with guaiacol before reaching a certain conclusion. I do not see any occasion for such action. I should, however, be very happy to see this question settled by long comparative investigations.

It may be inferred from my failure to mention expressly in my February report, or in the foregoing, the value of open air, sojourn in elevated places, pulmonary gymnastics, and proper nourishment, that I underestimate their importance. Nothing would be more erroneous! I have most forcibly emphasized the great value of these auxiliaries in my first (1887) treatise, and, of course, today consider the best conceivable thing for a patient to be the prolonged administration of large doses of creasote in air free from dust —hence in mountain, forest or sea atmosphere. When, therefore, a patient tells me he is going to Görbersdorf, Falkenstein, Davos, the Riviera, I have for years made it a point to reply: "That will be very well, but that alone is far too little."

Happily, however, creasote asserts its value as a remedy with an extraordinary number of patients who are not at all in position to leave their homes or interrupt their occupations for months and years. There are many school-teachers here in Breslau who daily teach classes of 70 to 80 children —the very opposite of a climatic sanitarium —and whose tuberculosis I have been enabled to cure completely by a year's use of creasote (1 to 1½ grammes creasote per diem)—this, too, when they could not even afford to leave Breslau during their vacations, to say nothing of discontinuing their avocations. *That cures may be effected under such circumstances, really imparts to the remedy its chief value*, for the number of those suffering from pulmonary or laryngeal tuberculosis who can afford to go to climatic stations for treatment during one-half to one year, is insignificant beside the total number of afflicted.

What creasote may accomplish in advanced cases, under certain circumstances, I have been able to show by my account of cases 10, 11 and 12. But even in the most advanced stages it is often not without value, as will be seen by the following extract from a letter of Dr. Günther of Montreux, recently received:

"Unfortunately they continue to send us at Montreux, where I act as German physician, cases in the last stages of disease. I have treated a number of these with creasote, administering daily for months as much as 2.5 grammes. The vital processes could no longer be influenced to the point of restitution, but the whole organism seemed to become reinforced, and if the fatal issue proved inevitable, the bodily well-being and the physical capacity were *astonishing*, considering the dissemination of the disease-process. Even where it can no longer cure, creasote possesses, in my judgment, in tuberculosis of the lungs, a conserving power which cannot be too highly estimated."

I again deem it necessary to controvert as emphatically as possible the *a priori* dread of the after-injury which creasote is supposed to produce on the stomach. It is true that in the first weeks of treatment, creasote causes some eructation, but as a rule this vanishes soon. There are also cases in which it would seem that creasote really cannot be borne. In such instances it may be questioned whether the form of administration does not make a difference, as by changing the form this apparently invincible objection is often overcome. It is certain, however, that every patient who uses creasote, if he has an attack of indigestion as a

result of his own carelessness, lays the blame at the door, not of his own folly, but of the creasote. Of course, in such event the use of the creasote must be suspended for a number of days. If anyone has had my opportunities to observe an extraordinary number of patients taking five, ten, twenty thousand creasote capsules without interruption, and was all the time assured by the patients that their appetite was always good, he can not possibly admit that creasote (ever presupposing a good quality) is harmful to the stomach—to say nothing of the fact that Klemperer has proven the very opposite by scientific experiments.

In conclusion, the following may be of interest: To obtain definite information respecting the consumption of creasote during the past six years, I recently applied for information to the only chemical factory which produces creasote for medicinal purposes, namely, that of Messrs. Hartmann & Haners of Hanover. Their courteous reply states: "According to our data, the consumption of creasote was tolerably uniform during the years 1883–1886, increasing in 1887 and growing steadily every year. Germany, the other European and the transmarine countries participate in the consumption. After Germany, France is the chief consumer."

THE INSOMNIA OF CONTINUED FEVERS AND ITS TREATMENT.—In the earlier stages of these fevers insomnia is pretty certain to accompany the hyperthermia, while sleep often attends a fall in the temperature. It would seem that overheated blood is itself inimical to sleep by exciting the cerebrum. Certain it is that cold bathing—the cold or tepid bath—and antipyretics that bring down the fever, quiet the nervous disturbances and promote sleep. Hence, for the restlessness and insomnia of typhus and typhoid fevers, there is often no better treatment than a cold bath of about fifteen minutes' duration, the temperature of the water being from 60° to 75° F., and during the bath cold water may be poured on the head in cases of extreme pyrexia with restlessness and delirium. While fifteen minutes ought to be long enough to depress the febrile heat to nearly the normal, in some cases the bath may be of longer duration.

Where the cold bath is impracticable, from difficulties on the part of the patient or his surroundings, some one of the new antipyretics may be tried. There is much testimony in favor of acetanilid as a nervous sedative in fevers. Five grains every hour for three or four doses (in an adult) will generally lower the febrile temperature two or three degrees, and one or two hours of quiet sleep (especially if the medicine be given in the night-time) is almost certain to follow. By many practitioners and hospital physicians, analgesin is regarded as the preferable hypnotic; the dose should be double that of acetanilid.

The antipyretics, though they undoubtedly have a marked action on the thermogenetic and thermotaxic heat-centres, which are under abnormal irritation by the fever-poison, an action which is extended to the higher cerebral centres, certainly do not affect the infectious agent, and hence the course of the fever is not influenced by them. Their prolonged use is probably attended by some cardiac depression (an evil to be especially shunned in fevers), and the best clinical authorities are shy of them, seeing no permanent advantage in the continued administration of these medicaments, but possible mischief. At the most, their employment is restricted to the obtention of such sedation as is needed for the nervous disturbances.

In regard to pure hypnotics, chloral is undoubtedly the best one. Sometimes in the later stages of the fever, 20 drops of deodorized tincture of opium is of service. Sulphonal, chloramid and the newer hypnotics are not of service. Alcohol, in not too large doses, has a place in this line of therapeutics.

Febrile insomnia is essentially a toxic insomnia; this has been made apparent by the investigations of the last few years. Whether it be the microbes or their ptomaïnes, or both, which excite the cerebrum and derange the nervous functions, has not been yet positively determined. Uræmia probably enters as an important factor; in the active stages of fevers, and in the declining stages when the circulation is oppressed and languid, and the prognosis is grave, elimination by the kidneys is always imperfect. Hence an important part of the treatment should be to promote the excretion of the poison and the removal of effete matters. Unfortunately, this indication can be but imperfectly met. All that can be done is by suitable nutrients and stimulants to sustain the organic forces in their struggle with the foe, and to favor elimination by the kidneys and other emunctories. The various diluents (lemonade, barley-water, effervescent drinks, plain water, etc.) which are so freely given, because so constantly craved, promote excretion by the kidneys. Milk is often prescribed *ad libitum* as the sole drink and nourishment; its diuretic properties are well known. Some clinical authorities are in the habit of ordering mild diuretic mixtures (solutions of

nitrate of potassium, of sweet spirits of nitre, with sometimes the addition for several successive days of a little digitalis) all through the fever, and claim good results.—*Therapeutic Gazette*, September 15th, 1891.

PEPSIN AS A SOLVENT FOR DEAD TISSUE.—Reference has frequently been made to the value of pepsin in dissolving false membrane, as in membranous croup, and physiological experimentation has taken on quite a tangible form in this direction. Recently Dr. S. Stewart, Secretary of the Iowa State Veterinary Society, in The Vis Medicatrix, refers to this subject under the caption "A New Use for Pepsin."

"Something more than peroxide of hydrogen is wanted for managing the abscess cavities of tuberculous bone-disease to our entire satisfaction. It is true that with peroxide of hydrogen at hand we can open the biggest of cold abscesses with a feeling of security for the patient, and yet it is desirable to get the tough lining membrane of fibrinous lymph, and the loose coagula, and the sloughing diseased tissue, out of the way as thoroughly as possible; for if once these substances have begun to seethe in fermentative processes, we are hard pressed to keep the patient out of trouble. The sharp spoon and scissors will do the work, to be sure, but only after tedious labor and egregious wounding of the weak patient.

"A resource was brought into play a few weeks ago when I had occasion to make suggestions relative to a crushed liver. Portions of the organ, which were dark and sloughing, remained so firmly attached that their removal was dangerous, and the pultaceous lining membrane of the enormous abscess seemed to invite all manner of microbe guests. The idea of liquefying the dead tissue with a digestive ferment came into mind, and this, being suggested, was carried into effect by the family physician, who injected into the abscess cavity a solution of scale pepsin, and writing to me afterwards said: 'The pepsin did mighty good work. It broke up all dead tissues, rendering them mostly liquid, and changed the color from brown to straw color. The wound was sterilized daily afterward with hydrogen peroxide, and the patient recovered without a bad symptom.'

"From experiments it seems that a 10-per-cent. solution of the best pepsin, acidulated with 1 per cent. of hydrochloric acid and heated to a temperature of 100° F. (not over 120° F.), will be proper for surgical purposes."

We need not employ pepsin until the patient has recovered from the effects of ether after an operation, and then the liquefying process can be attended to at leisure. The abscess cavity should be washed out with boiled water, for antiseptic solutions would interfere with the action of a digestive ferment. The patient then assuming a good position for holding the pepsin solution in the abscess cavity, he can receive the hot injection; and hot fomentations continued for an hour will promote the action of the ferment down below.—*Notes on New Remedies*, Sept., 1891.

POISONING BY SULPHONAL.—A writer in the Medical Press and Circular gives a caution regarding the very indiscriminate use to which sulphonal is frequently put even by the laity. This drug was introduced about three years ago as a perfectly safe soporific, and corroborative testimony of this hopeful candidate has been abundant. Latterly there have been a few contrary reports about the safety and efficacy of the remedy, and the size of the maximum or poisonous dose could not be unanimously agreed upon. We have not a few cases on record where about three tablespoonfuls have been taken to produce sleep; in one of these cases the sleeper slept the greater part of five days and a half without permanent injury to his nervous system. Another person took a dose about one-third smaller, but never reawakened. A more unusual and extreme case has recently been reported by Dr. Ernest Neisser. A chemist's assistant, aged fifteen years, took with suicidal intent the contents of two boxes containing fifty grammes each, equivalent in all to three ounces and over, of finely pulverized sulphonal. The greater part of the drug was taken mixed with water, but some part of it was swallowed dry, and all of it was ingested within forty-five minutes. Six hours later he was found lying in a comatose sleep, and was sent to a hospital, where he lay five days and nights in an unconscious condition. On the sixth day the awakening process took place gradually, and on the ninth day he was discharged cured; he was apparently perfectly recovered from all the after-effects of the enormous doses he had taken. In the great disparity of these recorded cases, we read the lesson either of a want of uniformity in the manufacture of the drug, or of an undiscovered "personal equation" in those cases where the comparatively small dosage resulted fatally. At all events, a certain amount of caution should be observed when ordering the drug for patients who have not heretofore been brought under its influence.

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Original Articles.

SOME COMPLICATIONS OF PSOAS ABSCESS.

BY J. M'FADDEN GASTON, M.D.

Psoas abscess has been so generally confounded with lumbar abscess resulting from caries of the vertebræ, that few practitioners lay any stress upon a clear diagnosis of it. That inflammation developed from the presence of pus resulting from osseous degeneration of the lumbar vertebræ is quite distinct from psoitis, originating in the substance of the muscle or in its sheath, is patent. In the former, the psoas, as well as the iliacus internus, becomes involved from the fact they lie in the tract by which the pus seeks an outlet in the inguinal or femoral region. In the latter, psoitis is the result of some direct violence to, or strain upon, the muscle, when of local origin; and in other cases follows diseases, being thus of an idiopathic nature.

The patient is not at the outset generally conscious of pain in the iliac region, but upon pressure along the line of the psoas muscle tenderness is revealed, showing the existence of inflammation in its tissues and in its proper sheath. From this inflammation, whether of a traumatic or idiopathic character, there is a suppuration within the sheath of the psoas muscle, constituting the true psoas abscess, with which this paper is alone concerned. This limitation of psoas abscess is requisite, as it does not imply a scrofulous diathesis, which underlies usually lumbar abscess from caries of the vertebræ, and necessitates entirely different means of treatment.

Psoas abscess may be a simple local inflammation, or may lead to constitutional disturbance of a grave nature, but is not associated with a strumous degeneration of the organism, such as exists in the lumbar abscess. In other words, the scrofulous element does not enter into it, unless as an incidental development. As the psoas magnus has its origin from the transverse processes of all the lumbar, and the bodies of the four upper lumbar and last dorsal vertebræ, it is a natural sequence that caries of these vertebræ should involve it in the resulting suppuration. But it is clearly a consequence, dependent upon its location in the lesion by which the pus descends under the law of gravity, when there is least resistance, escaping by the same outlets as that from psoitis.

While an ordinary simple psoas is accompanied with local signs of inflammation in the course of the muscle, there is a characteristic retraction or drawing up of the thigh on the affected side, due to the insertion of the common tendon of the psoas and iliacus internus into and below the lesser trochanter of the femur. This is due to the contraction of those two muscles from the irritation, and may be regarded as pathognomonic of the process of the inflammatory action in the tissues.

As a general rule, the collection of pus is to a great extent circumscribed, and by the thinness of the structures over these muscles there is a tendency towards the surface immediately in front of the quadratus lumborum. If fluctuation reveals the presence of pus, timely evacuation should prevent its extension towards Poupart's ligament, or its perforation into the large intestine. But if an incision be delayed, the point of least resistance yields, and the pus is discharged into the colon. This may be followed by temporary relief, and yet leave a fistulous opening that leads to future trouble.

A case of this nature was reported by me in the Southern Medical Record during the summer of 1888, in which psoas abscess was diagnosed in the right iliac region with all the indications for its evacuation But when I went the following day for the purpose of making the incision, the fulness in the iliac region with sense of flucuation had disap-

peared, so that the operation was not warranted. With a view to satisfy myself and my colleagues of the existence of a sac in the locality corresponding to the supposed abscess, a trocar was thrust in about midway between the crest of the ilium and the point of the twelfth rib. After passing the skin and subcutaneous cellular tissue there was a distinct resistance, as if by a firm tough membrane, when the point of the instrument advanced freely, giving the impression of an open space. Before removing the stylet, the canula was moved in different directions without meeting any impediment, but there was no discharge of pus, and the inference was clear that the purulent collection within the pyogenic membrane had found outlet. Inspection of the evacuations from the bowels, which were copious, gave indications of the presence of much pus. This was quite sufficient evidence that the purulent discharge had entered the colon by perforation of the walls of the intestine.

My colleague in charge of the patient, who had watched the progress of the case from the outset, concurred fully in this view of the matter, and that no further active measures were then requisite on our part.

In the meantime, by the peculiar legerdemain which is sometimes practiced by the friends of patients with the too ready cooperation of over zealous practitioners, the patient passed into the hands of other colleagues. Being informed that treatment was adopted upon a different impression of the conditions than those involved in my diagnosis, I sought by a written communication to one of the colleagues who had assumed charge of the case, to get a statement of his views for publication with mine. But no response came; and in the course of a month the patient returned with the acknowledgement that my diagnosis was correct, giving the fullest confirmation of its correctness in existing symptoms and subsequent progress. With the exception of a year's interval he has been under my charge since.

It was found convenient for the patient, during a visit in that section, to consult Dr. C. T. Parkes, of Chicago, who, discovering a zone of inflammation on the outer face of the ilium, made an incision transversely, six inches in extent, down to the bone. But no focus or cause of disturbance was found, and the incision was kept open with lint; so that it was gradually healed, excepting at a central point, from which there was a purulent discharge constantly, yet in small quantity.

Under these circumstances the patient was presented for examination by a number of colleagues at the meeting of the Medical Association of Georgia, at Brunswick, in the month of April, 1890.

He stated there seemed to be some communication of the bowels with this fistulous opening in the wound over the ilium and that air bubbles frequently were mixed with the purulent discharge.

Afterwards he came to Atlanta, with an aggravation of the fistulous canals which ran in various directions over the dorsum of the ilium, and I laid open several pockets in which pus was accumulated. In the course of the dressing of these incisions, there was found remaining a fistulous tract coming over the crest of the ilium, which has been kept open, and discharges pus constantly.

The patient being engaged in business at Jacksonville, Fla., wrote me from that place April 4th, 1890, saying:

"Matters have come out just about as you predicted when I last saw you. The pains and soreness returned, not so bad as when I was in Atlanta, but enough to compel me to leave Florida and go to my home in the North. I consulted all the local physicians near my home, and finally went to the Presbyterian Hospital in Chicago and had Dr. Parkes treat me. He concluded there was bone trouble and made an incision about one inch below where you probed when making the examination at Atlanta. He thought the hip bone was enlarged, but could not find the cause of trouble. At the end of a month I had improved so much I thought best to return to Florida and resume work, arriving here on the 15th of last November. About the first of March the scar began to get very tender, became irritable and (after about five days) very much inflamed, having the appearance of a large boil. Finally it broke and a large amount of pus escaped. It still runs freely. I experienced immediate relief when the pus began to escape; and although I have gained little in strength, feel much better in every way than for a year past."

He wrote again on April 26th, 1890, stat-

ing some facts of peculiar significance, in view of the former discharge of the purulent collection into the large intestine:

"The abscess in my side took rather a strange turn last night; my bowels having been somewhat constipated for several days, I took an injection, thinking that better than a purgative, which invariably causes trouble in my side. After taking the injection the bowels appeared to be disturbed, and when I went to stool the usual straining brought on alarming activity in the discharge from the wound in my side. What appeared to be the water I had a few moments before injected into the rectum, fairly gushed out from the wound at every strain. I slept very well all night, with very little pain or soreness in side or bowels, but the discharge from the wound was very copious, most of it the water-like discharge of the early part of the night.

"I had before imagined that there might be some connection between the bowel and the wound. On several occasions, while at stool, the straining of the muscles and distending of the rectum caused a sensation of air being forced along the course of the opening to the lip of the wound, and a feeling at lip of wound as of air being forced from it or of pus being forced bubbling out of the wound."

Another letter with date of July 13th. 1891, from Smithville, Ga., gives still further confirmation of a fistulous tract from the large intestine to the external wound. He wrote:

"The discharge from abscess has been constant. This is unmistakable evidence of a connection with the bowel, and during the last few days it has been more marked than before. I wish to see you and let you thoroughly examine the thing again."

The patient wrote again from Smithville on July 30th, 1891, as follows:

"There has been very little change in my condition since I last wrote you. Considerable discharge of pus from wound and a continual passage of air from it. I will endeavor to get to Atlanta in September and let you make thorough examination, and another incision if deemed necessary."

No further communication being received from the patient, it is inferred that there has been no aggravation of his sufferings latterly.

If it should devolve upon me to do a radical operation, by exploration of the fistulous tract to its entrance into the colon, I shall attempt the occlusion of this opening by denuding the edges and the use of Lembert's suture.

A case of traumatic origin, corresponding in its history of intestinal communication with the foregoing result of psoas abscess was under my charge in the Providence Infirmary, during the past six months. A young man twenty-four years old received a kick from a mule in the left iliac region which was followed by inflammation and distention of that locality. This subsided suddenly with subsequent discharges from the bowels of what appeared to be fæcal matter.

When the patient was first examined, on July 10th, 1891, at the Infirmary, there was tenderness with some induration extending from the iliac to the inguinal region in the line of the psoas muscle; this was less evident subsequently, yet there remained an oblong area of sensitiveness below the point of the last rib which was about the size of the palm of one's hand, and there was a space between the crest of the ilium and the rib, which upon palpitation imparted a feeling of emptiness within. An exploratory puncture with a trocar in the middle of this space revealed a dense resisting membrane, requiring considerable force for the instrument to pass into a cavity beyond. The stylet being removed, the cannula was passed in different directions without giving exit to any pus. This exploratory puncture was not followed by any notable consequences of a local or general nature.

The entire iliac region was subsequently coated over with the following: Collodion ℥ i, iodine grs. v, camphor ʒ i, mixed and applied over the surface with a camel's hair pencil night and morning.

After using internally for some weeks various alteratives and tonics, the patient was put upon Donovan's solution, with gradual improvement in all respects.

He left the Infirmary Aug. 14th, 1891, and writing from Madison, Ga., on the 31st of August, stated he had been taking the last medicine but does not get much relief "from a tight hard feeling in the abdomen."

The impression or inference that there was a psoas abscess originally, and that pus evacuated into the colon, rests upon the re-

port of the patient and his mother, along with the observation made in connection with my exploratory puncture.

Nothing definite can be determined as yet in regard to the final issue in this case, and I should not be surprised if an external outlet should ultimately occur as in the other case.

No further communication has been received from the patient during the past two months, which leads to the inference that there has not been any special aggravation of his condition, calling for advice.

A most interesting illustration of a psoas abscess finding an outlet into the colon, was presented in the person of a boy about twelve years of age, to whom I was called in consultation in the month of March, 1891.

In the course of an attack of fever, an acute inflammation was developed in the left iliac region, and eventually presented fluctuation extending towards the inguinal region, with a well defined bulging of an oblong shape.

The diagnosis made by Drs. W. A. Crow and W. P. Nicolson prior to my visit in company with the latter was that of abscess, and I was called to assist in a decision as to an operation. In the interval between the morning visit of Dr. Nicolson and our joint visit in the afternoon, a notable change in the case had occurred, while moving the patient in a carriage from one house to another in a remote part of the city. There was a marked subsidence of the protuberance in the iliac region, and the indications of pus appeared in the evacuations from the bowels, thus leading to the conclusion a psoas abscess had been discharged by perforation of the intestinal wall into the descending colon. Of course no operative measure was called for, and my only suggestion then was to smear the iliac region with mercurial and belladonna ointment.

The report, on inquiry next day, was, that the purulent discharge from the bowels had continued, with a further subsidence of the iliac prominence. The constitutional disturbance had almost disappeared, and everything promised a favorable termination in the complete evacuation of the abscess through the opening into the large intestine.

It was learned subsequently from the attending physician, Dr. Crow, that there was some febrile excitement for a week or ten days, when the purulent discharge from the rectum gradually disappeared. The boy's health was completely restored in the course of a month, and at the present time he is strong and hearty, without any notable effects of the abscess. It will be noted that this case of unmistakable discharge of psoas abscess into the large intestine is the only one, out of three which have come under my observation, that has escaped troublesome results.

One of the cases occurred in the psoas muscle of the right side, and the other two on the left, thus illustrating that the relations of the ascending and descending colon to the psoas and iliacus internal muscles are such as to allow of the direct outlet of an abscess on either side of the large intestine.

The gravity of a radical operation for the relief of perforation and consequent fistulous outlet into the bowel, renders prevention highly important.

The practical lesson to be learned from these cases or perforation of the intestinal wall from the collection of pus in the sheath of the psoas muscle, is to resort to an incision for the external evacuation of the abscess so soon as the evidence of pus is presented. Should there be no signs of fluctuation, after the progress of the inflammatory symptoms for several days, it would be a prudent step to make an exploratory puncture at such point as might reveal the existence of pus. In the event that pus is discovered, however deep-seated it may be, a free incision should be made without delay, so as to give it an external outlet. No time should be lost in poulticing or other measures, with a view to bring the pus near the external surface, lest the discharge may take the direction of least resistance and burrow through the intestinal wall into the canal.

The favorable results obtained generally, by timely operations for the evacuation of psoas abscesses externally, is calculated to encourage prompt action on the part of the surgeon in dealing with acute psoas abscesses, which are uncomplicated with caries or other osseous degenerations of the lower dorsal and lumbar vertebræ, dependent upon a scrofulous condition.

A detailed report of a well defined psoas abscess of a circumscribed character was made by me in the Medical and Surgical Reporter in 1885, which embodies the principal points of treatment in uncomplicated cases of this nature. In the progress of the suppurative action, which was deep seated and obscure, there was hectic fever with its characteristic phenomena of rigors, followed by well marked febrile paroxyms and ending in profuse sweat. Salicylate of soda and quinine were relied upon chiefly for controlling the hectic developments.

So soon as pus was detected in the iliac region, an incision was made midway between the crest of the ilium and the point of the twelfth rib, with the insertion of a drainage tube. A coating of iodized collodion was applied over the line of the psoas muscle, extending towards the inguinal region, to serve, by its contraction, as compression over the walls of the abscess. Subsequently, another focus of suppuration was discovered further back near the lumbar region, which was in like manner evacuated by an incision and followed by the application of iodized collodion. Compression with cotton and a bandage completed the cure, without any subsequent return of trouble.

The variety of outlets for psoas abscesses when left to be evacuated spontaneously, is a most notable feature of suppuration in this region. Almost every organ and tissue in the vicinity of the collection of pus has become involved, where it is not confined by a well defined pyogenic membrane. Not alone has the discharge found its way into the rectum, but into the bladder, or vagina, over the brim of the pelvis, along the inguinal canal at the obturator foramen and ischiatic notch.

Openings have occured after the pus has permeated the celluar tissue, in different portions of the thigh and leg, even as low down as the tendo Achilis. The extension of the suppuration along the fascia, assuming the nature of a diffused abscess, cannot be arrested by discharge at the most remote point, but calls for correction at its source by free evacuation and drainage.

If the origin of the trouble is discovered to be in the sheath of the psoas muscle, it still devolves upon the surgeon to adopt measures to obliterate the tract of the pus in the remote parts, as there may otherwise remain a fistulous canal leading from the focus to its outlet.

The plan found most effective under such circumstances is the application of stimulating embrocations with well graduated compression by a roller bandage.

Atlanta, Ga.

IMPERFORATION OF THE RECTUM.

BY GEORGE BEN JOHNSTON, M.D.

Authors differ as to the frequency of imperforation of the rectum. Its occurrence is variously estimated at one in from five to fifteen thousand births. That it is likely to be met with in any confinement, and upon its prompt recognition and intelligent treatment depends a life, is sufficient warrant to invite your attention to its varieties and their treatment.

The manner of development of the recto-anal canal answers for the diverse forms in which malformation occurs. The mesenteron is developed from the hypo-blast, while the meso-blast furnishes the outer coats. From the epi-blast spring the anus and sphincter portions of the rectum.

The proctodæum ascending unites with the descending mesenteron, and thus a continuous tube, the rectum, is formed. When from any cause these approaching tubes fail to properly osculate a malformation results. This imperfection may appear in one of four ways, to wit (Badenhamer's classication):

1. Complete occlusion of the anus by a membranous diaphragm, or by well-formed skin.

2. The anus is absent and the rectum ends in a blind pouch at a point more or less distant from the perineum.

3. The anus is normal in appearance, but ends in a cul-de-sac, and the rectum ends in a blind pouch at a variable distance above this point.

4. The rectum is totally absent.

It is by no means uncommon to find associated with this deformity other evidences of lack of development; notably, spina bifida, a contracted pelvis and extroversion of the bladder.

In the first class of cases the anus is simply

closed by skin or mucous membrane of variable density. The rectal pouch is not far removed from the perineum, and is commonly well formed.

The sphincter is ordinarily present, and the anal site is marked by a dimple or irregularity in the skin.

In the second variety the depth to which the rectal pouch descends into the pelvis is an unknown quantity. It may terminate near the skin, or it may end higher up, and the intervening space be filled with cellular tissue, or an impervious cord.

In the third form the rectum and anus may be kept apart by a bulkhead, or partition, more or less thick, or one or the other of these blind tubes may be diverted to a neighboring organ, as the vagina or bladder.

The fourth, or last, variety is only an exaggerated example of that form in which the rectum terminates before reaching the ascending anal portion of the gut and leaves a complete gap between the sigmoid flexure and the perineum.

Diagnosis is usually not difficult. Many symptoms are common to all the forms described. The most pronounced or noticeable symptom, and the one to which the attendant's attention will at first be drawn, is that of obstruction. The child passes no meconium nor gases. Pain, restlessness, refusal of the breast, wakefulness, crying and violent straining, distension of the abdomen, and later, stercoreceous vomiting, point to obstruction.

When such a state of affairs appears, a closer inspection must be made. If the malformation is of the first or second variety, a simple inspection will disclose the barrier. On the other hand, if the third class exists, a thorough exploration should be prosecuted; for here, to all outward appearances, there is no deficiency, and not until the well oiled little finger or a female catheter is introduced through the anus will the occlusion be discovered. We may, with some degree of certainty, rely on physical signs to enable us to form an idea as to the extent of a given malformation. Thus, if in the first variety, the anal site is seen to bulge, and if it impart to the finger a distinct impulse when the child coughs, or when it fluctuates, we may reasonably assume that the membrane shutting the rectum is thin, and that the rectum itself is perfectly formed. The same state of affairs existing in the third form leads to a like conclusion.

When, however, there is no anus, no bulging of the perineum and no fluctuation, nothing but the scalpel will reveal the extent of the deficiency. It is of the highest importance that an early diagnosis should be made, for changes inimical to the infant's life soon supervene. Peritonitis, septicæmia, or rupture of the colon will, one or the other of them, soon inevitably appear to end the sufferings of the little unfortunate, unless surgical relief is afforded. Nature, it must be remembered, does nothing for these cases. The treatment of such deformities is always surgical, and its success or failure depends upon the extent and variety of the malformation, and the promptness and skill with which it is applied.

In a simple case of skinning over of the anus, nothing is required beyond an ample crucial incision through the membranous obstruction. A free escape of meconium follows. The opening should be kept dilated by the occasional introduction of the tip of a little finger. The "tabs" of skin left by this proceeding may be trimmed off, or left to be absorbed.

Where an anus exists and a diaphragm keeps the descending and ascending portions of the gut apart, this is divided and dilated and continuity of the tube thus established and preserved.

When no anus is present, or where the rectal end of the gut does not readily reveal itself through a well formed anus, a more careful search is to be instituted. An incision is made in the raphé, extending from the root of the scrotum to the tip of the coxyx. This is to be slowly and carefully carried deeper into the pelvis, trending toward the hollow of the scrotum, until the hidden pouch is reached, or until it is no longer safe to cut farther. This procedure should be prosecuted with the greatest caution, for the meagre dimensions of the infantile pelvis will not afford much space to work in, and, moreover, recklessness might lead to disaster to some important organ. If need be, removal of the coxyx may be resorted to, in order that the field of operation

may be enlarged and the chance for ultimate success enhanced. It is never safe to carry this incision of search beyond an inch and a half in depth. Should the rectum not be reached within this limit, it is wiser to abandon this undertaking and seek another field, wherein an artificial anus may be established. Should we be so fortunate, however, as to encounter the undescended bowel, its extremity must be well freed by dissection from its moorings and drawn down and strongly stitched to the skin. This is absolutely required; for to simply open the gut and depend on a canal made by the scalpel, is but to court failure. To prevent cicatricial contraction, it is positively necessary that the tract throughout should be lined by mucous membrane. When after a painstaking search with the scalpel, the gut has not been discovered, abandon the search without inflicting further mutilation on the pelvic space, and thus complicate a second, and even graver, operation.

Above all, do not stab blindly with the trocar or exploring needle in the vain hope of striking the gut. Irreparable injury may follow such an exploit. When an intelligent and ample trial to reveal the hidden gut through the perineum has failed, a colotomy must be resorted to at once. Where shall it be? Littré says in the left groin; Amussat, in the left loin behind the perineum, while Hugier insists on the right groin.

Each of these sites has its advocates. The consensus of opinion, however, of recent authors is vastly in favor of the left groin. The selection of this point seems far more rational than either of the others, for reasons that are apparent.

It is not within the scope of this paper to discuss the methods of performing the colotomy. A colotomy for imperforation of the rectum will not differ from other methods of colotomy for other obstructions, and should be performed in the usual way.

I wish to record the two cases which serve as a text for the foregoing remarks. The first I saw ten years ago with a brother practitioner, now dead. It occurred in a male child of fair size and otherwise well developed. It was of the variety in which the anus was absent, the raphé extended unbroken throughout the entire length of the perineum. A diagnosis was made on the day of the child's birth. The usual perineal incision was made on the following day, which had been chosen as the time for operation. It was carried to a depth of an inch and a half. A reasonable effort was made in the endeavor to discover the gut above, but without success.

At this juncture, to my amazement, my friend abandoned the little fellow and handed him over to the inevitable. I urged a colotomy—he rejected my suggestion. A day or two sufficed to terminate the case in the death of the child. No post-mortem was made. No reasons were assigned which appeared sufficient to warrant this line of conduct. If my friend had been incompetent, I should have ascribed his conduct to that cause. Not so, however. He was a wonderfully skilful surgeon, a superior anatomist, and a man thoroughly true to the principles of his art—all of which made his declension to offer a last recourse all the more inexplicable.

The second case fell under my observation recently. On the 28th day of August, I delivered Mrs. C., primapara, of a male child weighing nine pounds. The delivery had to be made by means of forceps, on account of a slight transverse narrowing of the pelvis. By reason of an indisposition, which began at her bedside, I was prevented from seeing her until the third day. I found the child in great agony—fretting and crying, never sleeping and refusing the breast. I was told its bowels had not moved. An examination disclosed the cause of the trouble. There was imperforation of the anus. The position of the anus was marked by a puckering of the skin—and by palpation, I fancied, impulse and fluctuation could be made out. This proved erroneous in the light of subsequent events. It was now so late in the day that I was obliged to defer any interference until Tuesday morning, September 1st, when, in company with my friends, Drs. Daniel Coleman and Moses D. Hoge, an operation for its relief was undertaken. In the outset, I felt quite confident that the task of effecting an outlet would be an easy one. It proved otherwise. Under chloroform, an incision was made following the raphé, and through the site of the anus was

carefully carried into the pelvis. The gut was not reached where I thought it would be, so the dissection was continued to the depth of at least an inch and a half without any signs of ultimate success. I at once abandoned the search, and immediately proceeded to do an inguinal colotomy. This occupied only a few minutes. Changes had already taken place. The temperature in the axilla was 102° Fahr., and the abdomen was much distended by gas. The abdominal cavity was opened, and immediately loops of intestines protruded. These were enormously injected and completely distended. The descending colon was soon identified and stitched with silk sutures into the lowermost angle of the wound, and opened. At once a free escape of fetid gas took place, accompanied by a discharge of meconium. The belly subsided and the child's respiration, which had been much embarrassed, became deeper and easier. The wound was covered over with pledgets of absorbent cotton, and over these a single turn of gauze was wound. The child was laid naked on a pillow and well enveloped in soft flannels. I directed that the dressing should be changed every hour or two, on account of the free discharge of meconium, and that at each dressing the surrounding parts should be sponged with a solution of bichloride, 1 to 4000. For the first two hours after the operation the child slept profoundly, and then it awoke, nursed freely and with evident satisfaction. During the twelve hours next following the opening of the gut, the bowel thoroughly emptied itself. The operation was done at mid-day. At eight o'clock in the evening of the same day, the temperature had gone up to 102.5°—otherwise all symptoms were favorable. On the morning of the second day, the nurse reported a comfortable night for the little fellow. He had slept well—waking at intervals of two or three hours—and after nursing with enjoyment, would again fall asleep.

The temperature was now 103°, and on the evening of the same day reached 105°. There were no other symptoms in keeping with this high temperature, and hence it did not alarm me. The morning of the third day found the temperature again reduced to 102°, after another excellent night. The bowel was still discharging satisfactorily, and no untoward symptoms threatened. Nothing worthy of note occurred until the fifth day, when in the morning it was discovered that the temperature was down to 100°, and on the morning of the seventh day it was normal. During all this time every indication was favorable; the wound did well, the child slept and nursed as comfortably as one in perfect health, and I felt that its recovery was assured. On this day the stitches were removed, adhesion being complete.

It is now seventy-two days since the colotomy was done. The child has thriven and grown as well as a child could, and appears quite as capable of living as any child, however perfect.

To be the victim of an artificial anus is unquestionably a grievous annoyance. Yet one thus afflicted is by no means incapable of participating in the enjoyments and struggles of life.

It is our duty to rescue these little unfortunates, if only to lend them for a brief space to fond mothers. We must be true to the aims of our art, and sanction no enthanasia.

Richmond, Va.

ANÆSTHETICS IN NORMAL LABOR.

BY WILLIAM SCOTT, M. D.

Forty-four years ago there were two events that have proven to be of more than usual interest to me. One occurred in Scotland, the other in Ohio. One was when Jas. Simpson introduced chloroform in parturition. The other was when I was born. The results of the event in Ohio will pass away and probably be forgotten, while that of Scotland will grow and spread until the lesson taught is everywhere learned and practiced. I do not know what impression was made on the medical profession at large when Prof. Jas. Y. Simpson made known his discovery to the Edinburgh Obstetrical Society in 1847. Perhaps the doctors of that day did not differ materially from those of the present time, and were ready to rush forward and greet any new discovery with delight, even at the risk of finding themselves dupes in the end.

Prof. Simpson's experiment was a success, and there is abundance of evidence that his

followers in the old world were many. Finally America fell in line and her obstetricians began following the example of the illustrious Simpson. For over forty years anæsthetics and parturition have been associated in a greater or lesser degree. Like all new discoveries chloroform was considered safe and was perhaps often used recklessly and ignorantly in the hands of obstetricians. Yet from all sources of information that I have investigated I am unable to find a record of a death of a woman during labor which could be attributed to the anæsthetic. There is evidence that the practice adopted by Simpson was at once taken up by a majority of obstetricians, only to be abandoned and condemned, later, by those who at first gave their endorsement, for previous to the last fifteen years the use of anæsthetics in natural labor and for the relief of pain alone was clearly the exception and not the rule. Even to-day probably not over 15 per cent. of the older physicians ever use any anæsthetic in natural labor, unless it be morphia. Amongst the younger members of the profession the percentage would perhaps reach as high as 60 or 70. I believe the custom is gaining ground and eventually anæsthetics given for relief of pain alone and in natural labor will be the rule. The suffering women are becoming enlightened and interested in this subject, and I have known many instances where the attending physician was given to understand, when he was engaged in the case, that he was to use anæsthetics.

One of the loudest opponents of anæsthetics in labor is the midwife. The law bars her from their use, and should the patient demand them the vocation of the midwife is gone.

I once heard an intelligent physician in a medical society say that it was often impossible to use an anæsthetic in labor, because the law said that there should be two physicians present, and the second could not always be readily found.

All the necessary law on the subject can be found in Sec. 6990, Revised Statutes, Ohio Laws, which reads as follows: Whoever uses upon another an anæsthetic, unless at its administration and during the whole time the person is wholly or partly under the direct influence of it, there be present *a third person*, competent to be a witness, shall be fined not more than $25, nor less than $5.

I have never understood that the third person need be a physician, but an intelligent person competent to testify as a witness.

There are many objections raised by the opponents of anæsthetics in natural labor, such as:

1. The old quotation of bible commands and teachings:

2. That parturition is a physiologica cess and should not be interfered with:

3. That the anæsthetic encourages post partum hemorrhage:

4. That the same dangers surround the pregnant woman from the antiseptic as the non-pregnant:

5. That if given freely uterine constrictions will be arrested and labor suspended.

Considering first the moral sin or violation of bible teaching. I believe this objection is fast becoming obsolete. A minister quoting this law to one of the ladies of his flock was cited to another clause in the bible which gave the history of a man being delivered of a fellow being. The only case on record. This man was Adam, and he was made to sleep during all the stages of delivery.

Second, if parturition is purely a physiological process, it is the only one of the human body in which pain is associated where the performance of a function of a part causes pain; the act is no longer physiological but pathological. Pathology calls for relief. Physiology is cared for by nature.

Third, in the comparison of the dangers in the pregnant state with those of the non-pregnant. A careful study of the changes of the blood of the pregnant woman, and the enlarged and thickened walls of the heart, would cause me to answer that in pregnancy when chloroform (the proper anæsthetic) is used there is less danger than at other times.

Post partum hemorrhage is worthy of consideration. Channing met with four cases in 78 deliveries under ether. Dr. Montgomery says if the anæsthetic is used until labor is ended (this includes the third stage also), the patient is more or less exposed to hemorrhage. Fordyce Barker is

quoted as having seen but one case of post partum hemorrhage amongst several thousand deliveries under anæsthesia.

I was recently further convinced that even complete anæsthesia will not arrest uterine contractions by attempting to turn with my hand in the uterus. The contractions were so powerful that my hand and arm were paralyzed and rendered useless for quite a while, yet the woman was unconscious from the anæsthetic and knew nothing of the operation. Women have repeatedly given birth to children while drunk or while unconscious from convulsions, all control of the voluntary muscles being lost. I have repeatedly had an anæsthetic arrest false or spurious pains or contractions, and such arrest has been relief to the patient, and shortening of the stages of the labor. But I have never seen a proper or genuine uterine contraction arrested or suspended by an anæsthetic.

My personal experience with anæsthesia in normal labor has covered several years. I have clinical notes of some two hundred cases. During my first years of practice I used an anæsthetic in every case where it would be permitted. I have learned that this was unnecessary and perhaps unwise. I have learned that in some cases the pain is so slight that an anæsthetic is uncalled for. I have also learned that a physician *insisting* on using an anæsthetic, assumes an additional responsibility, for in case of accident the anæsthetic will be blamed. Two weeks ago I attended for the third time a woman who ten years ago took ether during her labor, at the persistent request of her physician. Her child only lived a few hours. While the anæsthetic was in no wise responsible for the death, it received the censure. The doctor was dismissed, and no persuasion could induce her to again breathe an anæsthetic. In my record of two hundred cases, I find one of slight, but persistent, post-partum hæmorrhage, which was aggraved on the slightest motion, notwithstanding ergot and strychnine were used. I do not know that the anæsthetic caused the hæmorrhage, but would feel timid about again using it with this patient. Once during my first year's practice I used chloroform against the wish of the patient. The family were of a low standard, both morally and intellectually. During the second stage of labor the woman left her bed and engaged in a fight with her husband. Coming off victorious, she returned to work, and to prevent any further exhibitions I kept her well anæsthetized until labor ended.

In a case of irritable heart, the lady having a large goitre, from which she was unable to lie down without being propped up with pillows, I refused to give an anæsthetic. The suffering became so intense and the solicitations of the lady and family so urgent that I used chloroform, the patient and family assuming the responsibility. The result was marvelous and most gratifying. In a short time the patient was sleeping between each pain, the heart ceased its violent action, and the labor was painless and satisfactory.

I used the A. C. E. mixture in one case of labor with a most undesirable result. I was compelled to trust the anæsthetic to an intelligent lady. The patient was a nervous, excitable young woman. She took the anæsthetic so badly that before its benefits could be obtained she would become excited and delirious, requiring force to control her actions. Her child was dead when born, and the perineum was torn to the anus. In this case chloroform should have been the agent employed, and a skilled assistant should have administered it.

From observations and experience I have reached the following conclusions:

1. In normal labor, all the stages may be facilitated and shortened by the use of an anæsthetic.

2. The pain of labor may be safely and completely obtunded.

3. The accidents of labor occur less frequently where an anæsthetic is used.

4. The occasions for instrumental interference are less frequent.

5. Hydrate of chloral and morphine are the best and the only proper anæsthetics for the first stage; chloroform for the second, withdrawing the anæsthetic altogether as soon as the second stage is ended.

I have learned to recognize these precautions:

In normal labor, never give an anæsthetic against the wishes of the patient or her friends.

Never produce complete anæsthesia; have the patient in a condition to answer when spoken to sharply.

If necessary to produce complete anæsthesia, have an intelligent, experienced person give the agent.

In a person prone to hæmorrhage, give ergot and strychnia during the third stage.

Avoid ether, because it is more unpleasant to the patient and inconvenient for the doctor than chloroform, and the charge that ether will excite a disorder of the kidney has been made with justice. To this I can testify.

HISTORY OF A MEDICAMENT.

The following article is by a contributor who has very often written for the MEDICAL AGE.

Ganivet was an impecunious graduate of a somewhat famous medical school in the French capital. He "hung out his shingle" on Rue Jean Jacques Rousseau, hiring for an office a diminutive room on the second floor of a large tenement block with a harness store underneath and a livery stable in the rear; taking his meals at restaurants and sleeping in his office; an economical way of living to which many young medicos have to submit before marrying rich wives, or before some other lucky turn of the wheel of fortune brings them reputation and hard cash.

To attain some practical experience and also in some degree to bring himself into note, he obtained the position of externe in one of the hospitals, devoting about two hours a day to gratuitous service; and with his friend Lapozème he carried on at certain stated times during the week a private "Dispensary" in the rear of the drug store of the latter, Lapozème, who had means, furnishing the apartment, and the medicines, and Ganivet doing the prescribing. This was also another means to "raise the wind," which was not prompted wholly by pure benevolence on the part of either of the officiating parties. It is needless to say that said "Dispensary" was suitably advertised by gilt placards, which were even placed on the walls of the "*Ecole de Médecine*," thus: "Free Dispensary, Rue St. Marie, rear of Lapozème's great pharmacy; patients will be treated Mondays, Wednesdays, and Fridays by the attending physician, Dr. Ganivet. *For the poor only*. Hours of reception, from 11 to 12 A. M."

But even this proved to be a very slow road to fame and fortune. Ganivet had, it is true, tried various means of eking out his income, such as speculating in stocks, "buying on margins," and selling when the market advanced a point or two, but he found after three or four months of diligent cultivation of the stock-market that his losses on the whole rather exceeded his gains. The worst thing about the speculating business was that it soon became a positive mania, absorbing all his time and thought; so he at length did wisely in accepting the advice of a very dear friend that if he meant ever to do anything with the profession of medicine, he must leave stock-brokers and "bucket shops" severely alone.

It must be confessed, however, that the thought of settling down to legitimate general practice became more and more irksome to him. Patients that came to him with money in their hands were few, and every month found him drawing on invested capital. He would have tried a specialty, but Paris was already full of specialists of all kinds. A happy thought at last struck him; he would find a new drug that would make a sensation throughout the whole medical world; a certain number of physiological, then clinical experiments would first bring it into notice, then a certain amount of advertising (chiefly in the medical journals, due care being taken to avoid the worst and most transparent ruses of the quack) would commend the new medicament to the attention of the medical profession generally. Experience had proved that even highly educated members of the healing art were not always free from gullibility.

This was clearly shown by the popularity which has attended a worthless preparation which had been foisted on the public by G. and C. pharmacists of Lyons. We say worthless preparation, which it certainly was as far as being any acquisition to the resources of pharmacy and materia medica, although it contained, strictly speaking, all the merit that belongs to hydrate of chloral;

this and nothing more. G. and C., in their zeal for the cause of suffering humanity and in the interest of their depleted pockets (it does not pay to be too philanthropic, you know, and the advice of Cardinal Wolsley, "Love thyself last," is too high ethics, as society is at presented constituted); these pharmacists, we repeat, thought that chloral hydrate was not sufficiently appreciated by the medical profession, so they put together a compound for hypnotic purposes which they called *chloralidea:* a little chloral, a little bromide, and some few of the common narcotics; it had a decided hypnotic effect, which was due almost entirely to the chloral in it. Now, the great advantage of this preparation was that it contained in every teaspoonful a full dose in solution of chloral and a full dose of bromide; and it directly benefited the proprietors, in that it rewarded them well for their labor in devising such a good combination, levying on every ounce sold a real protective tariff of four francs, or about 80 cents, which went to foster and sustain *a new industry* which employed in all about ten individuals of both sexes! Physicians bought or prescribed "chloralidea" because it was advertised in their medical journals, and was said to be "the best thing out" for sleeplessness. Then, again, the celebrated Prof. Lafayette, surgeon to the Hôpital Bonsecours, even went so far as to lend the weight of his great name to the new hypnotic (?), speaking of it in high terms in his latest memoir, and stating that it was now used extensively and almost exclusively in his hospital. The result was a "patent" which gave G. and C. full control of the manufacture and sale of that nostrum, and much gratuitous advertising in the medical journals, which, along with their own paid advertisements in the leading journals, rapidly brought "chloralidea" into demand, and soon gave these pharmacists a princely income.

Ganivet (to return from this brief digression) revolved in his mind the possibility of exploiting a similar preparation for his own benefit. He talked the matter over with his friend Lapozème, the pharmacist, who told him that the scheme was not only possible but practicable, and that they would only be acting in the direction in which pharmacy was tending if they were to give to the thought of Ganivet a material expression. In fact, the truth might as well be told that the day of servitude to that old fossil the pharmacopœia was over, and physicians were more and more leaving to certain obliging pharmacists to combine their medicines for them, being not over anxious to know what they were giving. He (Lapozème), knowing the readiness with which physicians as well as laymen may be humbugged, had had strong intention of taking that old standard preparation known as *Haustus niger*, which contains salts and senna, putting it up in six ounce bottles, trademarking it, then, after somewhat extensively advertising it, selling it to the retail drug trade for one dollar a bottle under the name of "The Senna Compound." It might be advertised as a purified extract of senna, containing the active principles of that well known cathartic in combination with an active saline, and in a form convenient for administration.

However, for the present he had something better in prospect. There was that fertile mine of the "aromatic series"—products of the destructive distillation of coal—which was yet far from being exhausted. In his own personal researches in the laboratory of the *Ecole de Medicine*, and subsequently in his private laboratory he had by a combination of analytical and synthetic processes hit upon a new substance which was neither an acid nor an alkali, but a C H O body with a little S and P. Like the now-famous antipyrin, it was a phenylhydrazine with acetacetic ether, and it contained besides a little H^2S, and H^2P. Such a product could not fail to have marked physiological and no less marked therapeutic properties. Such were the difficulties in its preparation, that without very precise details it could not be made; those details might be very easily obscured or withheld, the preparation might be secured by a patent obtained in every civilized quarter of the globe; and, should it prove to be of real therapeutic utility, the sales would be enormous, and Ganivet and his friend would be "well placed" the rest of their lives, with no occasion for hard work or worry; in fact, to use an expression current in England and America, if not exactly a French idiom,

"their bread would be buttered on both sides."

Here then was the promise of a bonanza. Lapozème supplied Ganivet with a quantity of the new chemical product, with which he proceeded to experiment as he had opportunity. He was fortunate, through the influence of his friend, Prof. S—— of the Hôpital des Pauvres, in obtaining the post of "sub-preparator adjunct" of the Laboratory of New Medicines. Here he had at his disposal any number of guinea-pigs, dogs, hares, frogs, etc., on which he could study the properties of the new substance. To his surprise he found it to act not so much on the general nervous system as on that particular part which innervates the heart, or, to speak more accurately, it proved to possess remarkable cardio-tonic properties, but whether this was through a specific action on the cardiac centre in the medulla, or on the intrinsic cardiac ganglia, or primarily on the heart muscle, he could not tell. He named the product *Cardiosthenine*. He made no delay in addressing to the Biological Society a note on the physiological action of this substance, detailing his physiological experiments, and giving the credit of the discovery to his friend Lapozème the chemist. The results of the experiments on animals clearly showed that the new "discovery" was likely to be no mean rival to digitalis, if it might not even supersede that medicament. But physiological experimentation must be followed by clinical trials, and here Ganivet and his friend endeavored to interest the "*chefs de clinique*" of some of the hospitals. They at last succeeded in engaging the noted Simon Levi, who was known as something of a medical enthusiast, (and whose findings and whose conclusions were received by the more cautious and level-headed members of the profession *cum grano salis*), to undertake a course of experimentation in his hospital service. The latter entered upon this work *con amore*, and caused to be published by his pupils the results obtained, *always favorable at the first;* and to show his zeal in the new cause, this celebrated hospital chief, within twenty-four hours after receiving his samples, communicated to the Institute and the Academy of Medicine a "note" on the new medicament, which was published the next day in all the leading medical journals, and was even copied by several of the newspapers. The drug had been found to be not merely a "succedaneum" of digitalis, but superior to the latter and to every other cardiac medicine known.

The fortune of the new medicament was made, and cardiosthenine was now the latest "fad," and it did not find its true level in the materia medica till Ganivet and his friend had reaped a golden harvest, which put them far above ignoble want for years to come.*

E. P. H.

Newburyport, Mass.

AN ATTEMPTED RESECTION OF THE STOMACH—ABANDONED—DEATH.

BY I. N. BRAINERD, M.D.

In April, 1891, L. W. C. called upon me for the relief of dyspeptic symptoms. I prescribed pepsin in cardamom, glycerin and syrup of ginger. Later the patient returned saying that he was no better, and that he was losing flesh. I prescribed the mineral acids in bitter tonics. This time he was much benefited for a few weeks. In July he began to spit up his food, a mouthful at a time, without nausea. Becoming suspicious, I examined his belly and found a solid body in the epigastrium. It was just palpable, and gave a slightly flattened percussion note. I asked the patient to return once a week, that I might keep watch of that growth. With each return of the patient, the tumor was more palpable because of its increase in size, and of the rapid emaciation of the patient.

The spitting had grown into vomiting. All the symptoms and signs becoming more marked and urgent, I sent the patient to Dr. Kennedy, of St. Louis, Michigan, for his opinion. He confirmed my diagnosis of cancer of the pylorus. The obstruction rapidly increased until *nothing* passed the

* An article with the above title was published a year or two ago by Dr Jules Cyr in a book entitled, *Scènes de la Vie Medicale*. The article is for the most part untranslatable, but has given me some hints from which I have worked out the short sketch above given, which has its application in "Scenes of Medical Life" in this country.

pylorus. The patient lost sixty pounds of flesh in four months, and at the time of the operation he could scarcely walk. I had given the patient several hints of the nature of his trouble, and had informed his friends; but I did not tell him the *whole* truth until about October 20th. Then I told him all, and that his only hope lay in surgery, and that that was only shadowy. I admonished him of all the dangers of the operation, of the largeness of the mortality (27 deaths in 37 operations according to the latest reports in my possession), and of the shortness of life to the survivors. I told him to take time to think of the matter, and that if he chose to chance the operation that I would undertake it for him.

In a few days he sent for me to set a day for the operation. I did so; and on October 26th, with the assistance of Drs. Kennedy, Shaffer and Belknap, after all antiseptic precautions were taken, began the operation of resection of the stomach. After cutting through the abdominal wall and the peritoneum, in an obliqne line near the border of the left ribs, the omentum and the stomach were exposed. In the former was a cancerous mass about three by four inches. The omentum was puckered up about the lower curve of the stomach, much as a woman gathers up her apron about her waist. The growth, which was nodular, vascular and fragile, embraced several loops of the small bowel, and the transverse colon. The omentum, small gut, colon and stomach were all bound together. Examining the stomach, I found it *filled* with neoplasm from the pylorus to within one inch of the cardiac orifice. It would hold no more than two ounces of fluid; and this amount was all I could get into it while washing it out before the operation. The cancer also extended four or five inches down the duodenum. Seeing that the case was inoperable, I closed up the incision. The patient sank rapidly under the anæsthetic, and received several injections of ammonia and of ether hypodermically. He rallied from the anæsthetic, but sank again and died in two and one-half hours after the wound was closed.

All of the above points in the pathology were verified post mortem.

This death should not be added to the fatalities in resection of the stomach because the resection was not made.

Correspondence.

NEW YORK LETTER.

New York, November 21st, 1891.

On Thursday evening, November 19th, the Anniversary Discourse was delivered before the New York Academy of Medicine by Charles F. Chandler, Ph. D., of Columbia College. The subject of the discourse was "Arsenic in Common Life." The main question discussed by Professor Chandler in his address was that of arsenical poisoning due to wall papers. He stated that while he was connected with the Health Department of New York City, some years ago, this question came up, and he considered it a proper one for investigation. He first spoke to the late Dr. John C. Dalton about it, who replied: "Has that old humbug come around again?" Other eminent physicians to whom he applied for information on the subject held a similar opinion. He then made a series of experiments with arsenical wall papers, and in no instance could he discover a trace of arsenic in the air, and he finally came to the conclusion that there was nothing in this popular idea of arsenical poisoning due to wall paper. Subsequent to these experiments, a number of cases of arsenical wall paper poisoning were reported in Boston; some of the students in Harvard College were taken sick from it, as well as the Professor of Theology. The physicians in Boston reported almost innumerable cases. If the arsenic could not be traced to the wall paper, it was found somewhere else. In one case the poisoning was due to the lining of a lounge, which was found to contain six one-hundredths of a grain of arsenic to the square yard. In another case it was due to a green shade; some green paper boxes; a bed-covering; a pair of stockings; a stuffed bird, and in one instance it was traced to a man's hat lining. One very prominent man in Boston was treated for over two years for arsenical poisoning from wall paper; upon investigation it was found that the paper was put on in 1817. The man died and at the autopsy it was discovered that he had cancer of the stomach. At first his physician was a little chargined at this, but he finally came to the

conclusion that that was the kind of cancer caused by arsenical poisoning. Almost without exception the Boston physicians and chemists stand committed to the theory of arsenical wall paper poisoning, caused by the generation of arsenetted hydrogen. Prof. Franklin, of the London School of Mines, investigated the subject some years ago. He had the walls of a room covered with the greenest kind of paper, and no trace of arsenic could be found in the air. Prof. Hoffman, of Berlin, states that he does not think there is any possibility of arsenical vapor being given off from wall paper. The wall paper manufacturers and dealers in New York City say that their employes never suffer from arsenical poisoning. In conclusion, Prof. Chandler stated that either the Boston physicians are more acute in making a diagnosis than their confrères in New York; or, that Boston people are more susceptible to arsenical poisoning; or, that it is due to some climatic influence; or, that there in nothing in it.

***

Considerable interest has been aroused in New York by the new plan adopted by the College of Physicians and Surgeons, of Chicago, under which the benefit of a four years medical course is obtained by allowing the students to be "non-residents" during the first year, simply requiring them during that time to do certain prescribed work under the care of a suitable preceptor, and make weekly reports of progress in the manner provided for by the faculty. At the last Commencement of Columbia College (of which the N. Y. College of Physicians and Surgeons now forms a part) President Seth Low stated that he hoped in the near future to see a four years medical course adopted at that institution, and such a step will no doubt soon be taken. It is almost rendered imperative—not only at the College of Physicians and Surgeons, but at Bellevue and the University Medical Colleges as well—by the increased amount of work the students are obliged to do. Besides being compelled to pass satisfactory examinations in the seven principal branches, they must present certificates of work done in pathology and in the laboratory and dissecting-room, and attend the clinics and recitations. The standard for graduation is being placed higher each year, and the life of a medical student is by no means a happy one. Even after he graduates his path is still covered with thorns on account of the local examinations instituted in many of the states.

LIQUOR SEDANS IN DYSMENORRHŒA.

Editor MEDICAL AGE:

The report of the following cases may interest your readers:

CASE 1.—W. J., Norwegian, 25 years old. Has, since the establishment of the menses at 18 years of age, suffered at every menstrual epoch, with pain so intense as to oblige her to remain in bed for two days each month. Had been treated at her home and in Copenhagen for dysmenorrhœa, with only temporary relief. Coming to America, she found employment as governess. Her trouble seemed to increase, in so much as to necessitate her remaining in bed four days instead of two. I was asked by a friend to prescribe for her, which I did without seeing her. A sample bottle of liq. sedans was sent with instructions to use a teaspoonful three times a day. The next menstrual epoch occurred in a little over two weeks. The pain was not as severe and the patient did not go to bed. The medicine was continued and at the next period the pain was still less. Discontinued the medicine until three days before next period, which passed with only a moderate degree of dicomfort. Have since not heard from the patient, she having removed to another section of the country.

CASE 2.—Miss B., age 16. While travelling in Europe menses appeared for first time. Severe pain in head and back, and general lassitude. Consulted a physician in Paris, and obtained no relief until the flow ceased. Before the next period she had returned to her home. One week before time for return of menses, began the use of liq. sedans. The period passed with no unusual amount of pain. Subsequent menstruations have been natural.

DR. W. E. ANTHONY.

Providence, R.I.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., DEC. 10, 1891.

Editorial.

PROPER NAMES IN MEDICAL NOMENCLATURE.

It is much to be desired that medicinal preparations be called by their descriptive names rather than after the discoverer, or by some fancy catching appellation that indicates only their therapeutic application.

Physicians can do much to obviate unrational medical nomenclature by informing themselves of the name by which drugs are are known to science, and prescribing them under this name, writing them in plain English instead of in the doubtful Latin that now characterizes the average prescription.

Medicine and pharmacy are no longer based on mystery, but are becoming daily more and more precise arts if not exact sciences, and it needs no halo of the unknown and mysterious to make drugs curative or potent in favorably modifying disease.

Away then with confusion and obscurity, let us call a spade a spade, and thus simplify very much the materia medica, or at least its nomenclature to the advantage of present and future generations of devotées of both arts, and the elevation of nomenclature above the mistiness into which present tendencies are enveloping it.

TEA TIPPLING.

It was not long ago that the London medical journals were discussing the quinine and strychnine habits so prevalent among American women.

We learn now that pernicious habits of over-indulgence in stimulants are not confined to America.

The London Lancet informs us that tea tippling is indulged in by the English sisterhood to the extent of upsetting mental equilibrium, and has diminished the native grace and dignity of English women.

The Lancet adds: We desire to assist in impressing upon women especially the fact that the *immoderate* use of their favorite beverage is fraught with considerable danger to health, and that this is especially true of those who lead for the most part an in-door life. Too often, unfortunately, conviction that the habit is injurious comes only after the break down, and the harm which has been done takes a great deal of undoing. It is idle to argue that Australian shepherds or half-savage Tartars drink tea in immoderate quantities, and are none the worse for it. Their mode of life enables them to do many things—we shall not say with impunity—which town dwellers cannot do, and we are convinced that no one living for the most part an in-door city life can continue to indulge freely in tea five or six times a day without suffering for it in the end.

MODERN METHODS OF TREATING DIPHTHERIA.

In the Bulletin Général de Thérapeutique for Sept. 15th, 1891, Dr. Parisot, of Voyes, publishes a paper in which he highly recommends irrigation with a solution of salicylic acid as a treatment for diphtheria. The former mortality of his cases was large (10 out of every 14), in a recent epidemic, when the new treatment was adopted, he had only five fatal cases out of every twenty-four. The formula which Dr. Parisot employs is as follows: Salicylic acid, one gramme; water, 980 grammes; alcohol (90 per cent.), 20 grammes. The salicylic acid is dissolved in the alcohol, and the water added. The apparatus for irrigation is a fountain syringe, with the reservoir made of tin. This is hung against the wall over the patient, The rubber tubing, which is connected to a projecting nozzle at the lower part of the reservoir, ends in a small glass tube drawn out to a point. A spring catch on the tube controls the current of liquid. When the apparatus is filled with the solution the head of the child is held by an assistant, the tongue depressed, and the jet

of fluid directed against the pharynx with sufficient force to detach and remove the false membranes. Several applications may be necessary to effect this, and if the membranes are not loose, time must be allowed to elapse until this is the case. As regards the position of the head, Dr. Parisot recommends that this should be forward and a little downward. When the child is feeble, it should be supported upon the arm of the nurse with its face turned towards the floor, so as to prevent the liquid flowing back and being swallowed in large quantities. The amount of fluid to be used on each occasion must be learned by experience. As a rule, three or four ounces each time is sufficient, and this should be practiced as frequently as possible. Dr. Parisot considers that salicylic acid has a destructive action upon diphtheritic formation. He showed by experiment that in distilled water the membrane simply became sodden and gradually disintegrated, this taking place very slowly, whilst in solutions of salicylic acid the membrane was rapidly dissolved; at the end of a few minutes only the meshes of network in which the cells had been supported were visible. The stronger the solution of salicylic acid the quicker and more complete was the destruction of the tissue. Dr. Parisot has further noted that when the diphtheritic membrane has been once removed by means of salicylic acid its reproduction was considerably slower and more imperfect, and therefore concludes that the acid has a favorable action upon the mucous membrane, which is rendered unsuitable for the growth of the pathogenic organisms and the reproduction of the diphtheritic patches.

The Times and Register, Nov. 28th., devotes most of its pages to current methods of treating diphtheria. It presents recent articles on this disease and reports of interviews with representative physicians.

An analysis of these views would seem to indicate that opinion is practically unanimous as to the hygienic, local and constitutional treatment, although there is naturally some variation as to the remedial measures employed to meet these three-fold indications.

Isolation, a sanitary environment, the careful gentle removal of diphtheritic membrane by peroxide of hydrogen and other antiseptics, preferably in the form of sprays, the application of chlorate of potash, mercuric chloride, pepsin, chlorine water by the probang, cold application to the throat, the counteracting of the poison in the system by calomel, sustaining and tonic treatment by alcoholic stimulants, peptonized milk, broth, ice cream, the concentrated foods, nutritive enema—and as a last resort in grave laryngeal obstruction, tracheotomy.

TREATMENT OF TYPHOID FEVER.

Dr. Valentini, of Könnigsberg, assistant at the clinic of Prof. Lichtheim, has been treating typhoid fever by the ingestion of very large quantities of fluid, and very great and exceptional success is claimed for this procedure. Dr. Valentini gives typhoid patients two litres of milk, one litre of bouillon, and as much water as can be absorbed without producing disgust and repulsion. He also gives 200 grammes of sugar of milk dissolved in water, partly for its nutritive, partly for its diuretic, action. Cold baths were also freely used. A marked feature in the clinical history of these cases was the presence of rather free diuresis. Dr. Valentini is not disposed to attribute the good results which he claims for his method solely to its probable influence upon elimination. He entertains the view that this method is beneficial because it restores to the organism the fluid of which it is deprived by the febrile process.

The London Lancet, in commenting on the Valentini method, inclines to the opinion that there is something in its favor, inasmuch as nutriment must be given to typhoid patients in fluid form, the free administration of diluents being grateful to these patients, but that faith must not be pinned to this method being alone efficient. The modern treatment of typhoid is the expectant one, with a minimum of interference.

Correct diet, milk being the staple; the control of diarrhœa, if excessive; the relief of hyperpyrexia, especially by the use of the cold bath or cold sponging; the combating of hæmorrhage, bronchial catarrh or other complication—such seem to be the generally accepted lines of treatment.

Where the cold bath is objected to, cold

sponging will generally be found of great value. The propriety of the use of antipyretic drugs, at all events as a routine practice, is open to great question.

Most observers are agreed that the typhoid patient is under the influence of a general constitutional poison which runs a fairly definite course, with characteristic developments and dangers at the various epochs, and that the aim of rational therapeutics is to husband the patient's strength, to avert or combat the various possible complications, and to await the normal subsidence of the activity of the typhoid virus.

THE EFFECT OF POISONS GENERATED IN THE SYSTEM.

In the ardor of searching for invading specific germs as the cause of disease the partizans of the germ theory forget the poisons that are generated in the system itself.

Dr. A. B. Marfan, supplementing the researches of Carrieu, Peter, Fournol, Revilliod, and Rendon has published a paper in the Gazette des Hôpitaux upon the morbid effects of overwork. An editorial resume of the paper in the New York Medical Journal conveys some interesting suggestions as to the effects of overwork and fatigue in producing disease through interfering with normal excretion. Dr. Marfan believes the amount of work or its kind has intrinsically but little to do with overwork. Some races seem to possess a special power of resistance to fatigue. Age, race, cosmic conditions, absence of proper training and force of habit, non-congenial pursuits, sudden change of vocation, and want of sleep and recreation, are all factors in overwork. All work and no play does more than produce simple dullness; it starts morbid processes induced by poisons generated within the organism itself. The deviations from health caused in this way are usually expressed by heart disturbances and typhoid conditions. Sporadic fevers, known as abortive typhoid, ephemeral, gastro-intestinal, bilious, or malarial, and so-called subacute rheumatism, are often of this nature. And various cardiac abnormities, such as heart strain and forced or irritable heart, are often, especially among athletes, due to fatigue or strain.

An explanation of the morbid effects of fatigue is not far to seek. Work produces waste. Within the organism the results of muscular activity, as Peter has pointed out in this connection, are creatine, creatinine, lactic acid, and certain nitrogenized and uncrystallizable extractives. Brain at work produces leucine, cholesterin, etc. Retained products of dissimilation, prejudicial to function and to life, clog the system when the emunctories are oppressed or fatigued. The entire nutrition suffers, owing to the insufficiency of oxygen due to this accumulation of waste. Blood thus charged injected into animals has caused all the symptoms of overexertion and death. The flesh of animals hunted or driven to death are often poisonous to those who consume it.

Overwork, then, alters normal physiologilogical and chemical processes. It paves the way for the germs of infectious disease. It prepares the soil necessary to the formation of noxious organic compounds. Innocuous microbes may develop under such conditions pathogenic properties.

RESORCIN IN LARYNGEAL PHTHISIS.

Dr. Tymowsky publishes in the Monatschrift für Ohrenheilkunde a contribution to the treatment of laryngeal phthisis. He considers that when the hygienic surroundings of the patients are favorable, rest and liquid nourishment are sufficient to heal simple erosions and even superficial ulcers. When the latter are of greater depth, and the surrounding tissue is infiltrated, cocaine and alkaline inhalations must be administered; and when the inflammation has been reached by this treatment, lactic acid in a solution of the strength of from 50 to 80 per cent., or an 80 per cent solution of resorcin, may be applied successfully. Iodoform, to be useful, must be applied twice a day, and only when the ulcers are covered with abundant granulations. Dr. Tymowsky believes resorcin is to be preferred to all other agents, and need only be applied once a day.

Book Notices.

THE COSMOPOLITAN FOR DECEMBER.

The letters of General Sherman now being published in the Cosmopolitan are unique; in fact, so far as known, they are the only letters ever written in the midst of hostilities by a great general to his daughter. We have the brief letters of Napoleon to Josephine, but there is nothing at all resembling the Sherman letters to be found in the literature of war. They not only throw a new light upon the character of the great man himself, but upon the operations then in process of being carried out. The second paper, which appears in the December Cosmopolitan, is unique in another respect,—that it is illustrated by a man who sat at Sherman's mess table during the campaigns of which he writes to his daughter. This most famous of war artists, Theodore R. Davis, is still alive, and supplements the Sherman letters by a very interesting paper paper of his own and a great number of sketches which he made at the time. Perhaps the article in the December number which will be read with the widest interest is that on Rapid Transit, by Captain Lewis M. Haupt, which is illustrated by every conceivable suggestion that has been made upon rapid transit. Mrs. Burton Harrison begins a new novel, "The Daughter of the South," and another Southern article is that by a gentleman who was a Confederate officer, and is entitled "Social Life in Richmond During the War." T. V. Powderly contributes an article under the Christmas heading, "On Earth Peace, Good-Will Toward Men;" explaining the great progress made in the cause of humanity during the past twenty-five years. The nuber contains 140 illustrations by such famous artists as Wilson de Meza, C. D. Gibson, Count Jacassy, Theodore R. Davis, Dan Beard, Lee Woodward Ziegler, and George Wharton Edwards.

SCRIBNER'S MAGAZINE FOR DECEMBER.

"The First Christmas Tree." Frontispiece. The Oak of Geismar. Drawn by Howard Pyle; engraved by W. M. Aikman.

"Afloat on the Nile." By E. H. Blashfield and E. W. Blashfield. Illustrations by E. H. Blashfield; engraving by Peckwell, Witte, Klotz, C. I. Butler, State, Varley, Heard, and M. J. Whaley.

"The Oak of Geismar." By the Rev. Henry van Dyke. Illustrations by Howard Pyle.

"Espero Gorgoni, Gondolier." By F. Hopkinson Smith. Illustrations by the author; engraving by Pettit, State, Putnam, and Heard.

"A Charge for France." By John Heard, Jr. Illustrations by L. Marchetti; engraving by Peckwell.

"Winter Lilacs." By Mrs. James T. Fields.

"A Painter of Beautiful Dreams." By Harold Frederic. Illustrations from paintings by Albert Moore; engraving by King, Kruell, French, Wolf, Peckwell, Andrew, and E. H. Del'Orme.

"The Wrecker"—Chapters XII.–XIII. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August—to be continued.) With a full-page illustration by William Hole.

"Peter Rugg the Bostonian." By Louise Imogen Guiney. Illustrations by Howard Pyle.

"A Little Captive Maid." By Sarah Orne Jewett. Illustrations by Herbert Denman; engraving by Witte.

"The Land of Poco Tiempo." By Charles F. Lummis. Illustrations after photographs; engraving by G. and E. H. Del'Orme.

"Peleus to Thetis." By Bessie Chandler. With decorative borders by Herbert Denman.

"A Fresh-water Romance." By George A. Hibbard.

"The Point of View." The Virtue of Receiving—Mr. Spencer as an Instance—Men's Work.

A PRACTICAL TREATISE OF THE DISEASES OF WOMEN, By T. Gaillard Thomas, M.D., LL.D. Sixth edition. Enlarged and thoroughly revised by Paul F. Mundé, M.D. Containing three hundred and forty-seven engravings on wood. Lea Bros. & Co., publishers, Philadelphia. 1891.

This new edition will be welcomed by the host of practitioners who have for so long a

time been guided by the teachings of this distinguished author.

The many new methods that have been suggested since the last edition of Dr. Thomas' classical work was issued ten years ago make the revised edition a necessity.

The task of building up, of adding to and changing such of the book as was necessary to its perfecting has been ably executed by Dr. Mundé, and in its present form it is a complete reflex of the most modern views of gynæcological practice.

Many new illustrations have been added which aptly impress the lessons of the text. No practitioner who wishes to keep himself informed of progress in the gynæcological art should be without this valuable epitome of modern methods of relieving the ills of women that the exigencies of 19th-century life make so prevalent.

An Abstract of the Symptoms, with the Latest Dietetic and Medicinal Treatment of Various Diseased Conditions. The Food Products, Digestion and Assimilation. Reed and Carnrick, Publishers, New York, 1891.

Messrs. Reed and Carnrick have furnished in this compilation much valuable information relating to the subject of dietetics and the selection of food adapted for different conditions of disease. Physicians will find it in condensed form well arranged and indexed a ready reference to the facts necessary for a judicious selection of diet to meet indications in Appendicitis, Bright's Disease, Carcinoma, Cholera Infantum, Consumption, Diabetes. Diarrhœa, Dyspepsia, Fever, Gout, Heart Affections, Liver Derangements, Obesity, Peritonitis, and Rheumatism. It can be obtained from Messrs. Reed & Carnrick 447 and 449 Greenwich St., New York, on request.

New Music. World's Exposition March.—Song Sketch When Love was Young. Brainard & Co., publishers, Chicago, Ill.

The Exposition March is an inspiring and musicianly composition, with a go to it worthy its subject. The Song Sketch is after the sentimental style which gay youth loves.

Notes and News.

What We Are Here For.—

Once as I walked upon the street,
A wrathful wight I chanced to meet,
Who beat his fists and loudly swore—
'Twas plain to see that he was sore.
I then did ask that man of sin,
What in creation ailed him,
That he should rave and tear his hair,
And stamp and kick and loudly swear.

A paper then he shook at me.
A form you've seen quite frequently,
A statement huge of monthly dues,
(No wonder that the man had blues).
The bill was one I'd sent to him,
In hopes that he might yield the tin,
Or me invite to share his crop
(This scheme would fit me like a top).

"Oh, cheeky man!" he loudly said,
"I'm tempted quite to punch your head,
As a reward for your great gall.
I'll never pay your bill at all.
Thy monthly dun, oh, man of pills!
My chivalric soul with anger thrills;
Thy dopes are gone, I need them not,
Thy puke and purge alike forgot.
Thy capsules tough, long passed through me,
For powders foul no use I see.
I took them once; alas! 'tis true,
But I have now no use for you."

I mildly took this vile abuse,
And leaving him did sadly muse
Upon our most unhappy lot,
Who bonds and gold galore have not.
'Twas ever thus since earth began,
That patient doth the doctor damn.
Unhappy cuss who seeks his fee
For work he's done so frequently,
'Mid kicking hard and great turmoil,
That my hot blood doth fume and boil.

The doctor meek, unlike the worm,
Doth ne'er upon his debtors turn,
But plods along, both night and day,
And constantly doth watch and pray,
For better times that never come,
E'en when his youth and strength are gone.
But when, like dog, he's had his day,
And his poor soul hath passed away,
His pitying friends on kindness bent,
May buy for him a monument.

And doctors young and doctors old,
Tho' sore thy need of sordid gold,
Remember when you're feeling blue
The great reward in store for you.
The vision may thy mind give ease,

The dread of death, perchance, appease.
Some medic friend in tearful mood,
May tell the world how very good
The dear departed doctor was.
And thus win for himself applause.

And so you see, there is, indeed,
No cause to worry o'er the need,
When thou hast left this world of strife,
Of food for child, or dress for wife.
Oh! friendly taffy is so sweet,
'Tis clothes to wear and grub to eat.
And when old Gabe doth stir thy bones,
More potent than a thousand tomes,
Thou'lt find spread open at thy feet
Fulsome praise and phrases neat,
To soothe thy resurrected soul,
More cheering than the flowing bowl.
Thy name in colors bright thou'lt see,
That endureth to eternity,
For in ye mirror's bright reflection
All faithful doctors are perfection.

—G. Frank Lydston, in the *Cincinnati Medical Journal.*

The Doctor in Modern Society.—

The physician of to-day exercises more or less influence upon all the affairs of life. In a sense he is the supreme educator, for juries refuse to convict; philosophers pause before considering abnormities of will, memory, or personality; the historian waits in his description of prophet and sibyl until the medical man has spoken. It is impossible to build a house properly, bring up children aright, discipline an army, or live with structure healthily developed and function of every kind unimpeded—which is the nearest approach to happiness for anyone—without first consulting the hygienist.

The modern doctor is everywhere—in society, in politics, mixed up with fine arts, religion, and philosophy. In a little paper written for Médicine Moderne, Maurice de Fleury thinks the medical man has just cause to be proud of his present position. Alphonse Daudet calls him the last priest and supreme belief. Painters and sculptors owe much to medical science. Anatomy, for instance, is the basis of their calling. The debt of novelists is even greater. The naturalist school works on quasi-scientific lines, and adopts methods common to all investigators of facts. The representatives of literature owe as much to Claude Bernard as to Balzac. This century is one of science, and among savants medicine occupies the first rank, because it is of wider scope and more human than any other branch. In his "Philosophical Dialogues," Ernest Rénan forecasts a social state of great splendor, in which the savant is king. Be the realization of this as it may, it is a significant fact that the practical needs of humanity are best known to the physician, who, in spite of himself, thus becomes a functionary of high order, invested in great degree with the welfare and happiness of the human race.—*Med. Record.*

Nature's Versus Man's Adulterations.—

Placid I am, content, serene,
I take my slab of gypsum bread,
And chunks of oleomargarine
Upon its tasteless side I spread.
The egg I eat was never laid
By any cackling, feathered hen,
But from the Lord knows what 'tis made
In Newark by unfeathered men.
I wash my simple breakfast down
With favorite chicory so cheap;
Or for the best black tea in town
Dried willow leaves I calmly steep.
And if from man's wild art I flee,
And drink pure water from the pump,
I gulp down infusoriæ,
And quarts of raw bacteriæ,
And hideous rotatoriæ,
And wriggling pologastricæ,
And slimy diatomacæ,
And hard-shelled ophryocercinæ,
And double-barreled kolpodæ,
Non-foricated ambœdæ,
And various animalculæ
Of middle, high and low degree,
For Nature just beats all creation
In multiplied adulteration.

—*Pharmaceutical Journal of Australia*

Fashions in Door-Plates.—

The custom in different cities as to door-plates and signs of physicians is described in the Post-Graduate.

In London a large door-plate of brass or silver is the thing. In the West End of that city, doctors seem to live together, and one may see two or three in the old-fashioned, very neat English-basement houses, that are to be found in such great number in Harley Street, Brooke Street, George Street, Grosvenor Square, and so on. In Brussels, the outside of the house is sometimes decorated *à la* New York, but generally with more

taste. There, professional men do not hesitate to announce their specialty. In Berlin, where a celebrated man may be one or more flights up, a porcelain plate neatly inscribed with black letters, sometimes with the specialty, and always with the office hours, is in good form.

In Paris, there is such an absence of signs or door-plates that it is in many instances difficult to know that you are at the right house, so modest or negative are the indications. In Paris, too, distinguished specialists sometimes live very high up, in great apartment houses without elevators. But some of the great Paris physicians live magnificently in town, and have fine country places as well.

Philadelphia and Boston outdo New York in the magnitude and splendor of door-plates and office-signs. It is doubtful if they are ever of any particular use, except for those who are looking for a doctor in an emergency.

The Hæmatokrit.—

An instrument, called the *hæmatokrit*, has been lately invented by Herr von Hedin; it is for determining the volume of corpuscles present in blood, and is based on centrifugal action. A volume of blood and one of Möeller's liquid (which prevents coagulation) are mixed together, and the mixture is brought into small thick-walled glass tubes, graduated in 50 parts. The tubes rest on a brass holder which is fixed on the axis of a rotation-apparatus. After some 8,000 rotations, in five to seven minutes, the process is complete. The separation between the corpuscles and the salt-plasma is more distinct, in that a narrow band of leucocytes appears between them. The instrument is useful in comparing the blood of different individuals. With a little practice, the total error is not more than one volume per cent.—*Nature.*

Influence of Surroundings in Producing Insanity.—

In the last number of the Journal of Medical Science Dr. Savage discusses this question, and begins by protesting against the acceptance of what is a too widely spread notion, viz., that nearly all insanity is the outcome of direct neurotic inheritance. The influence of heredity is not denied or minimized, but the great importance of environment is insisted upon. To quote the words of the author: "We are what we are in mind and body, to a great extent, as organic results of our forefathers; but that we are no longer naked savages is some evidence that progress and development in the individual and the race may take place as the result of changing surroundings." There can be no two opinions as to the encouragement to be got from such a view. A too great insistance upon heridity as the determining cause of insanity must land us in a hopeless pessimism as regards treatment; whereas a recognition of the influence of surroundings is the first step towards the construction of a reasonable and efficacious system of therapeutics.

New Operating Theatre of the Roosevelt Hospital.—

The handsome new operating theatre of the Roosevelt Hospital is rapidly nearing completion. It is intended that it shall embody all the latest improvements of constructure, as well as be supplied with the most approved of the many appliances used in modern surgery. To this end, Dr. Charles McBurney, who has entire charge of the arrangements of the building, spent some time in Europe last spring, gathering together the most recent ideas, in order that this magnificent contribution to surgical science may be made the most perfect of its kind in the world.

Be Cheerful in the Sick-Room.—

Humor is a very good thing in the sick-room. It is much better to carry a cheerful air and excite a mild spasm of the diaphragm in the patient than to appear like an undertaker. But while humor is a good thing, and, as has been aptly said, "laughs with you," wit is an edged instrument not to be used in the sick-room, for wit, unlike humor, "laughs at you."—*Dr. Holmes.*

Suicide of a Medical Student.—

A young man from Texas, who had been studying medicine at the University of Pennsylvania, became insane and was taken to a hospital, where he committed suicide by cutting his throat with a piece of glass.—*Medical Record.*

Therapeutic Brevities.

Chaulmoogra Oil in Leprosy.—Dr. Bergé, of the New Orleans Lazaretto, has reported three cases of leprosy that have responded favorably to moderate doses of oleum gynocardiæ. The October issue of the New Orleans Medical and Surgical Journal contains full particulars of the symptoms and their amelioration in each case. Dr. Bergé is so well pleased with the results of the treatment that he expresses the opinion that a specific remedy for the tubercular form of leprosy has been found in this oil. The improvement was great in all three cases, but it was especially noteworthy in one of his cases marked by the leonine aspect and by the œdematous extremities being so large that the feet were compared to "small watermelons." Dr. Bergé believes that the action of the drug is especially potent in the healing of the ulcerous state of the leprous tubercle, and he dwells with much satisfaction on the relief that one hopeless subject obtained whose extremities seemed swollen to the point of bursting and gangrene—accidents which would have been fatal to the patient in the condition in which he then was, but which were forestalled as soon as the man came thoroughly under the influence of the drug.—*N. Y. Med. Jour.*, Nov. 28th, 1891.

Treatment of Migraine.—In the Archiv für Psychiatrie, Band xxi, Heft 1, Dr. Neftel has a paper on this subject. As to treatment between the attacks, the circulation must be carefully attended to and kept active. Constipation must be got rid of, which is best effected by diminishing doses of mineral water and by the use of electricity to the abdomen. Muscular exercise must also be prescribed, and subsequent temporary rest, and nothing should be eaten or drank until at least half an hour later. Then a cup of freshly boiled water, he says, will be found wonderfully refreshing. The systematic use of electricity to the head is strongly recommended, and Dr. Neftel finds that in some cases the constant current, in others the interrupted, is beneficial. For the attacks themselves electricity is also recommended, together with ergotin for plethoric patients and salicylate of soda for anæmic sufferers, or a large dose of quinine for either class.

Therapeutic Use of Organic Animal Extracts.—At a meeting of the French Association for the Advancement of Science, Dr. Onimus, of Monaco, stated (Sem. Méd., September 23, 1891), that he had used organic animal extracts of various kinds therapeutically with good results. Thus, in a case of asystolism, he gave injections of cardiac muscle, which caused the disappearance of the suffocative attacks; the other symptoms, such as difficulty in walking, breathlessness, and general debility were improved by the injection of extracts obtained by macerating fragments of spinal marrow in glycerin. In a typical case of labio-glosso-laryngeal paralysis, which had reached the last stage, the injection of extracts of nerve substance was followed by great improvement. In three cases of diseases of the cord—transverse myelitis, chronic meningitis, and incipient ataxia—definite amelioration ensued after similar treatment.

Thymus Vulgaris in the Treatment of Whooping-Cough.—Since Dr. Neovius published a monograph on the advantages of this drug in the treatment of epidemic whooping-cough, Dr. S. B. Johnson, according to the Lyon Médical, has been giving it a trial, and his experience with it has led him to the conclusion that it is a specific in this disease. Dr. Johnson says that, if the medicament is administered regularly and with perseverance, the cure is invariable in from three to five days, but the use of the medicine must be persisted in for at least two weeks after the symptoms have subsided. The thymus is given mixed with a small quantity of marsh-mallow syrup. The only unpleasant effect likely to occur will be a slight looseness of the bowels. The preparation to be effective should always be made fresh.

Iodoform Injections in Goitre.—Dr. Kapper, an Austrian military surgeon, has employed in fifteen cases, with invariable success, Mosetig's plan of injecting iodoform emulsion into soft thyroid tumors. In every instance there was a diminution in the circumference of the neck amounting to from 8 to 10 cm. Antiseptic precautions were employed, and in some cases where the tumor was of considerable dimensions several syringesful were injected into different parts of the parenchyma. In order to ascertain whether the needle has entered the gland the patient is asked to swallow, when, if it has so entered, the downward movement of the syringe shows that the needle has been carried upwards. In some cases the injections were repeated daily for several days, in others at intervals of a few days. In no case were any untoward symptoms produced.—*Lancet*, October 17th, 1891.

Essential Oil of Cypress in Whooping-Cough.—According to Dr. J. M. Bravo (Revista Medica de Chile, No. 7, 1891) the most useful drug in whooping-cough is an essential oil obtained by distillation from the needles of the cypress tree. The method of employing the oil is to drop some of it on the children's clothing near the collar, or at night on the bed pillow, so that they breathe an air constantly impregnated with the volatile principle. The author's experience is summed up in the following conclusions: 1. The essence of cypress is the most rapidly successful in the treatment of pertussis. 2. It possesses none of the disadvantages of many of the other known remedies (for example, belladonna, balsams, etc.). 3. It is very easily applied, and has a strong but not disagreeable odor, to which children have no objection and which after a short time they enjoy.

Hypodermic Injections in Diphtheria.—I wish to report a use I have made, with considerable success, of the Seibert syringe, to wit: The employment of the syringe for the injection of strychninæ sulphas into the pharyngeal muscles in post-diphtheritic paralysis. Ten minims of a one-grain-to-the-ounce aqueous solution were injected daily.

The hypodermatic use of strychnine in this form of paralysis is, of course a common measure; but the peculiar adaptability of the Seibert syringe for this purpose, and my own experience with it, prompt me to send this communication.—Wm. S. Barker, M. D., in *Medical News.*

Injection in Acute Gonorrhœa.—Dr. P. Thierry, La Sémaine médicale, praises the following:

℞ Iodoform, grammes 10. (ʒ ijss).
Ol. amygdalar. dulc., grammes 60. (fl ʒ ij).
Vanillin, q. s.

Inject three times daily into the urethra, immediately after micturition, the patient being placed in the dorsal position and retaining the injection ten to twenty minutes in the urethra.

The first injection should be made by the physician. According to Dr. Thierry, the pains disappear after the first injection, and a cure takes place in twelve days.

Therapeutic Application of the Huckleberry.—Prof. Winternitz recommends a decoction of huckleberries (*Saccinium myrtillus*) in the different forms of diarrhœa. He covers the dried berries with cold water and cooks them for two hours, stirring them up quite frequently. After the mass is syrupy-like, he separates it from the remaining berries and presses the juice from them out. He then cools the juice, after which it is ready for use. One to two teacupsful of this juice per diem is the dose.

Winternitz claims that this preparation will act beneficially in the most pernicious cases of diarrhœa.

He uses this decoction in gonorrhœa as an injection, and claims to be very successful with such treatment.—*Blætter fuer Klin. Hydrotherapie.*

Ammonium Chloride in Epidemic Influenza.—In a paper recently read before the Academy of Medicine in Paris, M. Marrotte advocates the use of ammonium chloride in the treatment of epidemic influenza, more especially in those forms of the disease which are complicated with pulmonary congestion or inflammation. From 48 to 80 grains (three to five grammes), are given in twenty-four hours in the form of eight-grain powders, which may be conveniently concealed in wafers.

Cornutin as a Hemostatic in Hæmorrhages from the Bladder and Female Genitals.—Dr. Wilh. A. Meissels (Wiener med. Presse) recommends cornutin muriate or citrate as an efficacious hemostatic in vesical and uterine hæmorrhages. It may be administered subcutaneously or by the mouth. It is equally efficacious in males as well as in females. The dose employed was one to one and a half centigramme (one-eighth to one-fourth of a grain) a day. It is easily taken and supported by the stomach.

Fetid Feet.—The Times and Register recommends for fetid feet that the sufferer should soak the feet in hot water, and scrape them well, every night until the nuisance is abated; and to keep this up weekly thereafter, with morning ablutions of cold water no soap, but followed by vigorous rubbing with a coarse towel, and considers this is better than all the salicylated powders or ointments.

Tobacco as a Means of Shortening Labor.—Dr. J. F. Bird, in the Medical Bulletin, recommends smoking a cigar as a means of shortening the first stage of labor. The production of nausea by this means has the same effect as when it occurs naturally; the rigid os relaxes, dilatation goes on rapidly, the perineum yields, and the uterine contractions proceed unchecked.

Medical Progress.

THE MEDICAL TREATMENT OF CYSTITIS.—At a meeting of the Philadelphia County Medical Society, held on November 11th, Dr. James Tyson read the following paper:

The medical treatment of cystitis does not furnish a very satisfactory chapter in therapeutics. It includes such treatment as the physician is called upon to use supposing the exciting cause—such as a stone or obstruction in the urethra—to have been removed, wherever possible. I say when possible, because the enlarged prostate which is responsible for so many cases of cystitis is, in the vast majority of cases, not removable even in these days of brilliant surgical results. It must also include the treatment of a certain number of cases in which no removable cause is ascertainable, as well as cases where, as with a long previous gonorrhœa, the cause has long since been removed, but has left a deep-rooted tendency scarcely eradicable.

It should be stated, too, at the outset, that the vast majority of cases of so-called cystitis are inflammations of the neck of the bladder and of that part of the urethra passing through the prostate.

Acute cystitis is far less commonly met by the physician than the chronic form, while its treatment is far simpler, and, I may add, more satisfactory, at least so far as the removal of the acute symptoms is concerned. Rest in bed is a primary and essential condition. Leeches to the perineum should be applied more frequently than they are. A poultice to this same region and over the abdominal region is always useful, while a brisk saline cathartic should never be omitted.

As the feverish state which always accompanies cystitis is more or less constantly associated with a scanty urine, concentrated and irritating to the inflamed mucous membrane, it is desirable at once to increase the secretion, and thus dilute it. Copious libations of pure water, to which the citrate or acetate of potassium is added, in fifteen- to twenty-grain doses for an adult, should be allowed. The ordinary spirits of nitric ether in two-drachm doses every two hours is an admirable adjuvant, and may be combined with the officinal liquor potassii citratis, which contains about twenty grains of citrate of potassium to the half-ounce. Formerly the mucilage of flaxseed or flaxseed tea was much used as a diluent menstruum for the diuretic alkalies indicated, but I am doubtful whether it is any more efficient than a like quantity of water.

Where there is much pain and straining, as is often the case, especially where cantharides is the cause of the inflammation, opium is indispensable, always in the shape of a suppository, half a grain to a grain of the extract being thus administered, or a proportionate amount of morphine. Iced water injectians into the rectum, or pieces of ice similarly applied, are very efficient in allaying the pain and irritation where additional measures are needed.

The successful treatment of *chronic cystitis* is a much more difficult task, for three evident reasons: 1st. The constant pressure in the bladder of the urine with its irritating qualities, especially to an inflamed mucous membrane: 2d. The difficulty in getting remedies to reach the inflamed surface: 3d. The pent-up inflammatory products, which in their decomposition often make the urine still more irritating by exciting in it ammoniacal changes. There is no doubt that, if the urine could be kept from entering the bladder during the existence of an inflammation, the latter would rapidly heal; that cure would be facilitated by obtaining ready escape for the pus and mucus formed in the inflammatory process; while happier results might also be reasonably expected if we could secure readier access for remedies to the inflamed areas. None of these indications can be met entirely, hence the difficulty in attaining a cure. They remain, however, the conditions to be fulfilled, and while none can be thoroughly secured, they may be approximated in various degrees. To do this should be the object of treatment.

First, the irritating qualities of the urine may be diminished by the use of diluents as already recommended in the treatment of acute cystitis. Almost any of the negative mineral waters, so highly recommended by their owners, are useful for this purpose. Just as good is pure spring-water, or even Schuylkill water, and better is distilled water. From one to two quarts should be taken daily. If the kidneys are equal to their office, a large quantity of light-hued urine, of low specific gravity and relatively weak in solids, will be secreted.

When it is proposed to go further and add to the efficacy of diluents, mistakes are often made. While one can scarcely go astray in adding alkalies to the fluid ingested in acute cystitis, it is very different with the chronic form. In this the urine is often alkaline, or ready to become so on the slightest addition of alkali to the blood. Such alkalinity of urine in turn favors decomposition, the effect of which is to convert the pus, if present, into a tenacious, glairy fluid which the blad-

der cannot evacuate. Notwithstanding this tendency, I have known liquor potassæ and other alkalies to be administered under precisely these conditions—adding fuel to the flame. The indication under these circumstances is to render the urine acid, if possible, although this is very difficult to accomplish. Benzoic acid has the reputation of doing this, and it probably is true of it when administered in very large doses. It may be given in the shape of a five-grain compressed pill, of which at least six must be given in a day to produce any effect. The same property has been assigned to citric acid, but this is a mistake, as all of the vegetable acids, when ingested, are eliminated as alkaline carbonates.

The second indication is to medicate the inflamed surface. Two ways, of course, suggest themselves: (*a*) By the internal administration of drugs: (*b*) By the injection of medicated liquids into the bladder.

To carry out the first method, an enormous number of infusions, decoctions, and fluid extracts of vegetable substances have been suggested, the vast majority of which are absolutely useless, except as they serve by their quantity to act as diluents. Among the best known of these are buchu, brava, uva ursi, and triticum repens. I have never known any beneficial results from any of them, and have long ago ceased to prescribe them.

The only class of remedies I have found of service in cystitis through their internal administration are the balsams. Of these, the balsam of copaiba is practically unavailable, because not one stomach in a hundred will submit to its ingestion in sufficient doses or for long enough time to permit it to be of any use. On the other hand, I have found sandalwood oil very useful, and it is about the only remedy of which I can say this for its direct effect upon the mucous membrane of the bladder. It is also comparatively well borne by the stomach, and is best administered in capsules containing ten minims. I believe it has heretofore been the usual custom to give these and like remedies after meals, but I have recently adopted the method of giving them on an empty stomach before meals. I believe they are as well, and even better, borne than when given after food, and they pass into the blood much more quickly. It is desirable to impregnate the blood and impart to the urine a balsam odor. This is scarcely possible with less than eight capsules a day—two before each meal and two at bedtime. I think I may say that I have found the so-called Santal-Midy capsules, which are, I believe, nothing but a very pure sandal-wood oil, better borne than the other specimens of the oil. I have given as many as twelve of these a day for considerable periods of time without deranging the stomach.

Both boric acid and benzoic acid are useful adjuvants to the treatment of chronic cystitis through their antiseptic effect on the urine, each in five-grain doses rapidly increased to ten. I have used resorcin in five to ten-grain doses, and naphthaline in two-grain doses for the same purpose.

The application of remedies to the bladder by injections can be conveniently considered in connection with the third indication—the getting rid of the products of inflammation, the pus and mucus, and the compounds resulting from their decomposition. The latter are, of course, not always present, but all who have had much experience with cystitis are familiar with the tenacious, glairy mucoid matter, which will not drop or rise up in a pipette, glistening with large crystals of triple phosphate, and exhaling a stinking ammoniacal odor which quickly contaminates an entire apartment. There is only one way to get rid of this, and that is to wash out the bladder, and too often this is too long deferred. Tepid water should be first used, and the injection made through the soft catheter now so invariably adopted. Sir Henry Thompson is very emphatic in his directions that no more than two ounces should be thrown in at a time, and that this should be allowed to run out, a like quantity again injected and allowed to run out, and this repeated until the water comes out as clear as it enters. In a very large experience in washing out bladders, I have never met an instance in which the amount named by Sir Henry may not be doubled with advantage, so that I begin with four ounces. When this quantity is used, a much shorter time is necessary to cleanse the bladder thoroughly; and after the capacity of the bladder has been determined I often throw in more, because it is sometimes useful to distend the viscus a little, for in this manner the depressions and inequalities between the muscular trabeculæ, always present in advanced bladder inflammations, are thoroughly reached. These simple injections, practiced once a day, or in severe cases twice a day, often result most happily. I have seen the pus reduced from large bulk to a mere trace, and micturition reduced from five or six times to once a night. Commonly, after a few injections with plain water, I add some medication. My favorite is the salicylate of sodium in the proportion of a drachm to the pint. Its disinfecting qualities are undoubted, and

I have some reason to believe that the soothing effect claimed for it is not without foundation. I have used a good deal of Sir Henry Thompson's soothing solution—of biborate of sodium an ounce, glycerin two ounces, water two ounces, and of this mixture half an ounce to four ounces of tepid water—with about the same result. Boric acid, in the proportion of a drachm to the pint, is also very satisfactory.

Alum is an astringent which has been too much overlooked of late in suppurating processes in mucous membranes, and may be substituted for the salicylate with advantage where the pus does not diminish as rapidly as is desired. It should be more cautiously used than the salicylate of sodium. Sufficient of the powdered alum should be first added to a pint to give it a distinctly astringent taste, when the bladder should be washed out as described, while a small quantity may be allowed to remain after the last injection.

Where there is a foul odor present I use the bichloride of mercury in solution, but exceedingly dilute. It is almost incredible how small a proportion of this salt is irritating to the bladder, and, having learned by experience, I never begin with a solution stronger than 1 to 25,000, but gradually increase the strength if it is well borne. Carbolic acid may be substituted for the bichloride of mercury, but it has not been so satistory in my hands.

Other drugs are recommended to be similarly used, but I have had little or no experience with them. One from which much may, with reason, be expected is the peroxide of hydrogen, one part to five of water. In the single instance in which I have used this the patient,who had been previously using the bichloride solution, returned of his own accord to the latter, because he thought it more satisfactory. Among other remedies recommended to be used the same way are acetate of lead, one grain to four ounces; dilute nitric acid, one or two minims to the ounce; and nitrate of silver, one grain to four ounces; but I have had no experience with them.

Anodynes are indispensable in many cases of cystitis to relieve the patient of extreme pain and the frequent desire to pass water, which are the result of the same cause. Opium and its alkaloids are the most efficient, and they are best introduced by the rectum. There appears to be no absorbing power for opium at least, and there is no use in attempting to use any anodynes by that channel.

Cocaine, from which so much might reasonably be expected, has failed of its purpose in my hands. I have injected as much as two ounces of a two per-cent. solution into the bladder without effect, excepting to produce some of the symptoms of cocaine poisoning. Most disappointing, too, has been the use of cocaine to remove the exquisite tenderness of the urethra which sometimes attends this condition, and is a serious drawback to the use of the catheter.

Where there is greatly enlarged prostate, catheterization is indispensable, and is attended often with the most happy results. It is often too long deferred because of the natural repugnance to the use of the instrument. Of course, the patient or his friends should be taught to use the catheter and to wash out the bladder. In these days of refined antisepticism it is scarcely necessary to say that the extremest precautions should be taken to cleanse the catheter after its use, in order to avoid sepsis. There is nothing better for this purpose than the bichloride solutions (1 to 1,000), in which the catheter should be allowed to lie for a short time after being cleansed with boiling hot water.

How much can be accomplished by such treatment as the above-described? That an absolute and total cure is ever obtained in chronic cystitis is exceedingly doubtful. Hence the statement at the beginning of my paper, that the medical treatment of cystitis does not furnish a satisfactory chapter in therapeutics. On the other hand, that a life of suffering may be converted into one of comparative comfort is certainly true, and I have many times seen it. Nay, more; I have more than once seen a life prolonged half a dozen years in such comfort by careful attention to the bladder of the kind described.

It occasionally happens, of course, that all treatment of this kind fails, and yet the patient lives to be tortured by the discomfort of the situation. Three times I have had perineal section done by the surgeons for the relief of such cases, in each case with some relief, although with less than was hoped for. —*N. Y. Med. Journal.*

THE CONSTITUTIONAL DISTURBANCES FOLLOWING THE PASSAGE OF INSTRUMENTS INTO THE MALE URETHRA AND BLADDER.—Dr. Paul Thorndike, of Boston, has contributed at the last meeting of the Massachusetts Medical Society, a very excellent paper, in which he has grouped and definitely classified in a practical manner, the various diseased states occurring after instrumentation upon the urethra and bladder. His division of the cases seems so admirably capable of containing all the different conditions met with,

that we will quote his synopsis of the four classes. This is as follows :

I. The cases of "urethral shock" brought about by the simple passage of an instrument into the urethra. Very common, and, as a rule, of very little importance, but occasionally terminating in speedy death. The fatal form is rare, and is usually associated with renal disease of some sort.

II. The acute cases of "acute urinary fever" caused probably by absorption of poisonous products from the urine. This acute attack at times occurring without any known cause, such as further instrumentation.

III. The cases of "chronic urinary fever," coming on after catheterization, in cases where obstructive disease had pre-existed for a long time.

IV. The cases of "septic infection" from an unclean instrument. This may be merely a mild cystitis; may extend upward and cause septic trouble in the kidneys, or may manifest itself as a true general septicæmia or pyæmia.

An examination of the literature of this subject convinces us that the above classification is plain, practical, and wide enough to include all cases. It is also founded upon the most recent clinical and experimental knowledge, so that as a good working classification it is doubly commendable.

The first class of cases includes all those due to shock. These vary from the slightest "catheter chill" to a fatal degree of shock, which is happily of rare occurrence. The most common form of "catheter chill" occurs directly after the use of instruments and soon passes away without any bad effects.

The second class includes all cases of acute fever, commonly called "catheter fever." Usually this occurs within a few hours after the passage of the instrument, and rarely persists longer than twenty-four hours. The etiology of "catheter fever" is still a matter of discussion. Some writers regard it as due to shock, as all admit the first class of cases are; others state that malaria is the causative factor; while others believe that it is due to uræmia. The fact that the attack does not commence until some hours after the passage of the instrument is against the "shock" theory, for we should naturally expect it to begin immediately after instrumentation, and also to be in proportion to the severity of the surgical procedure, but clinical experience teaches us that such is not the case. Again, if catheter fever is due to shock, we should expect, as Dr. Thorndike remarks, that prophylactic measures would be powerless to prevent its occurrence after urethral operations, yet from the testimony of able surgeons we know that a large proportion of urethral operations are followed by no febrile disturbances, especially at this time when perfect drainage is secured, and the urine prevented access to the wound.

Mr. Reginald Harrison, who is entitled to speak with some authority upon this subject, believes that this acute febrile attack under discussion is due to the septic absorption, and he has found in his experience that it is more likely to occur when the wound is made in the floor than when it is situated in the roof of the urethra. He says: "A dependent position of the incision is more likely to be associated with the fever than one not so situated." If it be admitted that septic infection is the cause of ordinary "catheter fever," the question arises: Which constituent of the urine is responsible for the symptoms? To determine this, Dr. Bouchard, of Paris, has recently made very interesting studies, with the result that he attributes the symptoms to the absorption of certain alkaloids formed in the intestines by putrefactive organisms, and normally excreted in part by the kidneys. These researches still lack confirmation, and it may truly be said that they have only opened a very wide field for the further study of the physiological chemistry involved. The weight of evidence proves that "catheter fever" is due to septic substances, but their precise nature must still be considered largely hypothetical.

The third class of cases, or those of chronic fever, embraces all the cases in which fever arises after catheterization for the relief of urinary incontinence due to distension and weakness of the bladder, usually caused primarily by an old stricture or a chronic prostatic hypertrophy. The "residual urine" has slowly increased in amount, and chronic distension with consequent atony of the walls of the bladder finally occur, after which the cases come under observation. The onset, course, and determination of this type of fever are thus described by Dr. Thorndike: "The patient is instructed as to his condition and started regularly on his catheter-life. In a few days he begins to feel poorly, has chilly feelings, but not necessarily a distinct rigor. He becomes feverish, but his fever is slight and has distinct intermissions. He loses appetite, suffers from thirst, and feels wretchedly all the time. The tongue becomes dry and brown. Examination generally shows a cystitis, more or less marked, even if this condition did not exist before the beginning of regular catheterization. This condition may exist for weeks, and yet the patient recover with proper care,

or it may end fatally, in which case there will be found almost invariably advanced disease of ureter and kidney."

The cause of this type of fever has been explained, in those cases in which there is associated disease of the kidneys, by the theory that the withdrawal of the urine relieves the pressure long exerted by it upon the kidneys through the dilated ureters and calices, thus inducing active congestion of the kidneys, which, owing to want of normal elasticity caused by the chronic fibroid changes which the organs have undergone, cannot be controlled, and an acute pyelonephritis is the result. In a certain proportion of cases, however, post-mortom examination reveals no chronic lesion of the kidneys, and for such cases no adequate explanation is forthcoming.

The fourth class comprises all cases of direct septic infection from the passage of unclean instruments. The cases differ widely; thus, we may have a simple cystitis, or it may extend up the ureters and cause septic pyelo-nephritis and death from surgical kidney; or direct infection may occur through a wound made by the unclean instrument, and we may have a true septicæmia or even pyæmia with general formation of pus in the tissues and in the serous cavities of the body.

The fact that such serious affections do occasionally follow the use of instruments upon the urethra and bladder, certainly is the strongest possible plea for the most scrupulous care in the proper cleaning of apparatus, and in all surgical procedures upon this part of the body.—*Phila. Med. and Surg. Reporter.*

Hypodermic Medication.—In an article on this subject by M. F. Weymann, M. D., published in the St. Joseph Medical Herald, this writer makes some good suggestions as to the technique of this method of administering medicines. From his paper we excerpt the following:

In spite of the frequent use of hypodermic medication there exist, even to-day, practices that we should almost think impossible. In fact, the very construction of the vast majority of syringes shows that the manufacturers have not yet grasped some of the essential points in the making of that instrument.

A good syringe should have a piston with a "milled" handle to afford a firm grasp to the fingers. Smooth metal favors slipping of the hand, one of the most fruitful sources of unsuccessful injection. The end of the barrel at the handle should also have a "milled" rim for the same reason, although two small rings afford a still better hold. The only objection against the latter is that they make the instrument unsightly and demand a rather large case. The barrel is usually made of metal enclosing a glass cylinder in such a way as to make the interior visible. In some there is but one open face, in others two, in opposite directions. The latter is by far the better plan as the contents can be examined much better when light actually passes through. Held against a dark and a light background alternately the smallest particles of impurities become at once visible.

The recognition of solid particles is important not only for judging that the solution is complete, but also for keeping the needle in good condition. When we consider that clogging usually takes place through small parts of leather detached from the piston, this will at once become clear.

The most important reform in the manufacture of syringes is to be made in the attachment of the needle to the body. To my knowledge there exists only one pattern, where the base of the needle carries the thread of the screw, while in all others it is attached to the barrel. The latter arrangement makes the opening into the barrel so small that hypodermic pellets cannot be dropped into it.

One syringe which meets all the indications for use is manufactured by Parke, Davis & Co., and is a marvel of practical qualities. All *syringes not allowing the introduction of undissolved pellets I consider inferior in the most essential point.* No matter how great the difference in other details, they all should agree in that one, for it affords perfect asepsis, perfect dosage, and ready dissolving, without trouble.

With regard to the needle it might be stated that the thinnest size should always be chosen, although different thicknesses may become necessary for some purposes. With a thin needle the pain accompanying its introduction is almost *nil.* A sharp point also contributes to this effect. While graduation of the piston is superfluous there should be a collar for tightening the leather of the piston.

Another item of importance is the keeping of the syringe. If it be in frequent use, little care is necessary, for the solutions injected almost all possess antiseptic properties. The first duty is to keep the leather in good condition. This may be done with strong carbolized vaseline, which at the same time imparts softness and flexibility, causing the

instrument to work smoothly. A hypodermic syringe should never be used for anything but medicating injections. Observing this rule sepsis need not be feared even in the absence of antiseptics, because an aseptic condition requires no such agents. However, if, as I have had occasion to observe, the same syringe be used for aspirating the purulent contents of tuberculous glands, etc., we need not be surprised over bad consequences. After every injection, the needle should be emptied by sucking or blowing, because the presence of fluid favors the occlusion of its lumen by oxidation.

If the injection be made at the proper place, the quantity of solvent has little influence; but when it is thrown under the skin where closely adherent to the subjacent tissues, the quantity should be limited. This, of course, refers only to the solvent, not to the medicinal principle. In the upper arm I have, for the sake of experiment, injected in myself as much as four drachms without the least discomfort or after-effects. I believe that double that amount, and more, would pass just as easily. In other places, where the skin is closely bound to the parts below, large quantities become painful on account of the rather small and unyielding meshes of the cellular tissue. However, even the same quantity in the same place may cause very different sensations. If the barrel is emptied quickly and with force, the sudden distension becomes painful, while a slow, though uninterrupted, discharge is not felt at all.

Some physicians only employ water sterilized by boiling for hypodermic use. That is, of course, a very safe way, but by no means necessary. Ordinary drinking water is sufficiently aseptic, especially if derived from a flowing supply.

The old method of preparing a solution, which is then drawn up into the syringe, should be discontinued, because it encourages dangerous proceedings. Some carry a standard solution with them and grade the dose by taking up a fixed quantity, as recorded by the graduated piston. Such solutions are all right when fresh, but we all know that, after some time, dissolved alkaloids have a strong tendency to decompose. In the latter case we not only fail to give the proper dose, but we also inject products of chemical decomposition liable to act as local irritants, irrespective of constitutional effects.

The proper places for injections are determined by the thickness of the skin and the closeness of its adherence. The thicker it is, the more painful the piercing becomes; again firm attachment makes the emptying of the syringe hurt a great deal. A thin and loose skin therefore offers the place most desirable for injections. Both these conditions are found in an ideal degree along the postero-internal surface of the upper arms. Also the anterior surface does very well. Next comes the front aspect of the fore-arm and then the skin covering the inguinal folds. The latter place is often ineligible from reasons evident to every one. In woman the skin is rarely as thin as in man owing to the thick layer of subcutaneous fat.

Before piercing the skin pinch up a large fold and stretch it well. This will afford plenty of surface and create a space into which the physician can plunge the needle without any fear whatever of wounding other parts. If the skin be moist so as to slip from the fingers, a handkerchief placed between them and the skin will effectually prevent this trouble. While it is very safe always to wash the part with soap and water, or perhaps some antiseptic, this precaution becomes superfluous in persons of clean habits. The emptying of the barrel should be slow and without interruption. Rapid distension of the subcutaneous connective tissue is sometimes very acutely felt by the patient. Continuous discharge is desirable, because interruptions usually result in oscillations of the tip of the needle, which is liable to meet objections from the patient on account of the suffering which it produces by scratching the tissues beneath the skin.

WYETH ON THE TREATMENT OF GONORRHŒA.—In an article in the International Journal of Surgery, Dr. John A. Wyeth says:

As regards diagnosis a specific urethritis may be differentiated from non-specific urethritis by the virulence of the symptoms. This can be readily done after the lapse of a few weeks.

When specific urethritis is recognized in its early stage the patient should be impressed with the importance of rest and the regulation of his diet. Any attempt to abort the diseases by means of injections of bichloride of mercury are not justifiable, for any substance capable of destroying the virus of gonorrhœa can also do serious damage to the delicate living membrane of the urethra. It is better to attempt no medical interference at all than have recourse to such measures.

The diet of these patients should be nutritious and simple. All stimulating drinks such as coffee, alcohol, etc., should be avoided. The use of fruits and gentle laxative drinks is indicated for the purpose of regulating the bowels. Citrate of potash in

twenty grain doses four or five times a day may be taken on account of its beneficial effect on the urine. A hip bath night and morning will be found of value for its antiphlogistic qualities.

In addition to these general measures, certain local methods of treatment should be carried out, and the principal one of these is to secure a free discharge of pus from the urethra. The penis should be kept pendent and the common practice of placing a piece of lint or absorbent cotton over the meatus cannot be too severely condemned, as it interferes with free drainage from the urethra.

Injections of the urethra in gonorrhœa are contra-indicated in the acute, inflammatory and suppurative stages of the infection. Nitrate of silver locally applied, possesses more curative properties than any other agent, but is objectionable on account of the discoloration that is produced by its use. The least objectionable injection consists of acetate of zinc in a weak solution of subacetate of lead. From one to three grains of the zinc salt may be used to an ounce of the lead solution. A small quantity of vaseline is rubbed upon the tip of the syringe, and with the patient lying on his back without having previously emptied his bladder, the conical end of the syringe is introduced into the meatus and pressed in with sufficient firmness to prevent the escape of the fluid. After having retained the injection in the urethra for from one to three minutes, it may be then permitted to run out and the patient directed to empty his bladder. A second quantity, somewhat less than the first, should then be injected, and these injections should be repeated night and morning. On the appearance of any symptoms of irritation, such as cystitis or increase in the urethral inflammation, etc., the injections should be at once discontinued.

During the acute stage of the disease while the inflammatory symptoms are prominent internal medication should not be resorted to. Ten drops of the oil of gaultheria three times a day may be taken for sterilizing the urine, and is the best remedy that can be employed for that purpose.

Dermatol. — Dermatol is a new iodoform-substitute. It can be used as powder; as it does not cohere in "balls" and is finely pulverulent, it is best dusted on from an atomiser. In this way, the substance is uniformly distributed without loss. On account of its non-poisonousness, no particular care is required as to the quantity applied. For relatively dry wound-surfaces, for fresh wounds, and so on, a thin layer is sufficient; but when the surfaces secrete copiously, are not clean, or are extensive, it is advisable to lay on the powder more freely. Under the solid dry crust thus formed, healing goes rapidly forward without secretion or symptoms of irritation. In order to avoid adhesion between the surface of the wound or ulcer, *e.g.*, in the treatment of burns, with the protective dressing, it is well to interpose a covering of oiled silk. In cases where one has to do with very sanious processes, associated with abundant secretion of mucus, pus, and so forth, that is to say, where dermatol cannot come into direct contact with the tissues, it is not by itself sufficient. Here a powerful moist antiseptic is indicated, though even in such cases dermatol is a valuable adjunct in the cure, as, for example, after the enucleation and irrigation of an abscess.

For certain slight skin affections, excoriations, intertrigo, slight moist eczema, dermatol is not used alone, but preferably in combination with an indifferent powder, such as starch. The combination indicated by the following formula has proved an excellent dusting-powder for the feet: Take dermatol, two parts; French chalk, 7 parts; starch, 1 part; make a powder.

To small wounds, a 10-percent. emulsion of dermatol with collodion should be applied. In other cases, for instance in gynæcological practice, a 10–20 per cent. emulsion with glycerin is useful. In extensive ulceration, dermatol ointment is indicated in some such formula as the following: Dermatol, 1 part; vaselin, 9 parts; or dermatol, 1 part; wool fat, 8 parts; vaselin, 1 part; make an ointment.

Naturally dermatol is not indicated in the treatment of torpid ulcers, chronic ulcers of the leg, etc, where a stimulant application, *e.g.*, silver ointment, is called for. For fistulæ, abscess cavities and the like, sticks can be prepared by the usual pharmaceutical methods. Finally, a *dermatol-gauze* (10 per cent. and 20 per cent.), for the treatment of wounds, is prepared by various manufacturers of dressings. It has the great advantage over iodoform-gauze that it can be sterilized.

The Curability of Urethral Stricture.—The question of absolute cure of stricture of the urethra has long been debated and is still unsettled. Certainly it has rarely been accomplished hitherto. The new doctrine is somewhat as follows:—*Firstly.*—There is a prospect of perfect cure by dilatation in cases where the duration is reckoned in months, but not by dilatation with the old instruments. The capacity of

the normal adult urethra is far above the old full sized catheter, No. 12 English. And though this instrument may pass freely a stricture may exist, and if so will certainly contract. And it is not till the dilatability of the strictured part has been fully restored and maintained at its normal limit that a fear of relapse may be abandoned. What this dilatability should be in any particular case must be judged by the size of the canal in front of it, after slitting the meatus if necessary. No. 16 to 18 English is an average for the penile urethra, the bulb rather more, and the triangular ligament and membranous portion two or three numbers less. But it is altogether another matter when the trouble has existed for years. It is quite hopeless to attempt the absorption of the tough fibroid material with bougies and catheters. And even after internal urethrotomies, relapse is the rule if instruments are not passed periodically. I recently heard one of the senior surgeons in a large London hospital state that he could remember but two certain cases of cure after stricture, men under observation for fifteen or twenty years after treatment, and without the passage of any instruments, and both these had been treated by external urethrotomy. Possibly we shall have to return to this somewhat discarded means in the search for perfect results. The essential point, and one not sufficiently emphasized in this treatment, is the after care. The tendency to contraction during the healing process is very great. The part operated on must be kept fully dilated by the assiduous use of the large modern instruments, so that it may heal up slightly fuller, if possible, than normal, at the part. The least contraction permitted during healing is very difficult to get rid of after, and does away perhaps with the prospect of perfect cure.—H. Herbert, F.R.C.S., Eng., in *Indian Medical Record.*

THE ENLARGED PROSTATE AND ITS OPERATIVE RELIEF.—Dr. E. L. Keyes in Medical Record publishes a paper on this subject. His conclusions are as follows:

1. Prostatectomy is justifiable, and does what nothing else can.

2. The perineal operation is moderately less severe, but decidedly less reliable than the supra-pubic; it should rarely be preferred, unless there be urethral complications. In very feeble men it may still be elected.

3. The operation is not justifiable with present statistics if the patient can be comfortable in catheter life.

4. No physical condition of the parts or of the patient, short of a practically moribund state, contra-indicates operation. By it in desperate cases life is often actually saved, although the operation is a grave one and its mortality high.

5. With the rongeur—better than any instrument—the bladder outlet can be lowered, and polypoid or interstitial growths jutting into the prostatic sinus can be removed, and these points are more essential to a successful operation than is the taking away of a large portion of the prostatic bulk. The instrument next in value is the curved scissors. But the skilled finger is most important of all. Most of the work has to be done by the aid of touch, as the bleeding soon becomes free and renders visual inspection impossible.

6. Theobromine, perhaps, is of value when the kidneys are damaged. It certainly does no harm.

7. Chloroform alone, in my opinion, should be used as an anæsthetic for the kidneys' sake.

AN INSTRUMENT FOR MAKING APPLICATION TO THE URETHRAL CANALS.—For the past three years I have been working in the Philadelphia Medical Mission, and it has been necessary for me to do considerable gynecological and venereal work, minor operations for misplacements, endocervicitis, endometritis, lacerations, etc.

I have been experimenting to find a rapid, cleanly, and economical way of making applications to the endometrium and urethra.

I have used suppositories, tampons, and medicated bougies, only to be disappointed. To my mind the excipient in medicated bougies and suppositories prevents the absorption of the medicament by coating the passage, and when the suppository or bougie liquefies by the heat of the body, the medicament is drained away from the location where placed and needed.

I began the use of powder by insufflation to the cervix and vagina several years ago, and for ulcerated conditions of cervix it gives excellent results.

My first instrument, which I made myself over a year ago, was a hard rubber insufflator tube with a wire wrapped on the extremity with thread. With this crude instrument I could push powder, boracic acid, iodoform, etc., into the cervical canal or urethra. At my request, last April, Mr. Yarnall made me an instrument, which is a seamless aluminum tube, with a steel piston, aluminum-pointed, and steel finger and thumb pieces. It is very simple in construction and easily used.—A. B. Kirkpatrick, M.D., in *Times and Register.*

The Medical Age.

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Original Articles.

NOTES ON CEPHALOMETRICAL MEASUREMENTS.

BY CHARLES H. MERZ, A.M., M.D.

The study of craniotomy cannot but prove a source of never-ceasing interest to every physician, inasmuch as it has been conclusively proven that there are causes that manifest themselves early in life, exercising a powerful influence over the child's future career, and also that later in life the shape of the human cranium bears a direct relation to the mental capacities of the individual. The subject is of such magnitude that the researches, interesting as they are, of Hitzig, Ferrier, Fritz, and others, upon cerebral topography, cannot be entered upon in an article of this length, and attention must be directed to the consideration of the measurements that will convey some idea of the diversity of form of the cranium.

In cephalometry, skulls are distinguished by the terms dolicocephalic (long), mesocephalic (middle), and brachycephalic (short); which are used merely to convey an idea as to the relation the length of the skull bears to the breadth. An index having been established, all length breadths below 78 are dolicocephalic; from 78 to 80 they are mesocephalic; and those above 80 are termed brachycephalic.

In determining the causes that lead to deformities and irregularities in the skull, *synostosis*, premature or abnormal obliteration of the sutures, is found to be a frequent one. It must be remembered that the primordial skull is a membranous capsule with a cartilaginous base. This is continuous and without joints, and the bones appear as secondary changes. If these be delayed or unusually increased during childhood, pressure of the edges will lead to obliteration of the sutures and the consequent deformity of the skull. The yielding nature of the child's skull makes it possible to be moulded by the pressure of a bandage, or even by the contained brain itself. These abnormalities are designated by certain terms: Macrocephalus, the large head, frequently the result of hydrocephalus; microcephalus, the result of a lack of development of brain tissue, or the premature closing of sutures.

At birth, the circumference of the head taken at the brow and occiput is greater than the circumference of the chest. This difference is maintained for some months, but in well-developed children the measurements become nearly equal at the age of one or two years. After the fourth year the chest rapidly increases as compared with the skull. The size of the head will often be found to be dependent upon the parentage, so that in judging of the microcephalus head some allowance must be made for family peculiarities of little import.

Oxycephalus, or sugar-loaf head, is due to a premature union of the parietal with the temporal and occipital bones, causing an over-development in the bregmatic region. This peculiarity of skull is said to be frequent among epileptics and criminals.

Trigonocephalus is due to a premature union of the frontal suture, and compensatory development in the occipital region—giving a triangular shape with the small end in front.

Chæmocephalus, or flat-headedness (Fig. 3).

Plagycephalus, or twisted head (Fig. 4).

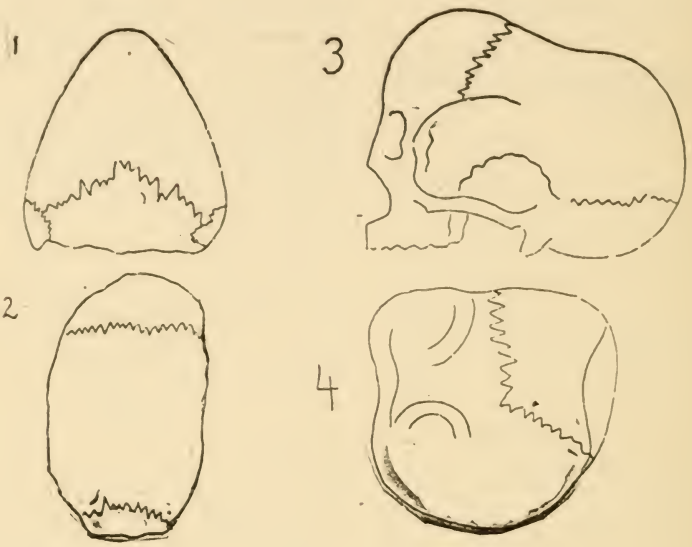
Scaphocephalus, or boat-shaped head, due to a premature union of the sagittal suture, or development of both parietal bones from one center (Fig. 2).

Leptocephalus.—From premature union of the frontal and sphenoid bones.

As stated in a former paper, all skulls are asymenetrical, so that we are not at liberty to pronounce a want of development or a compensatory hypertrophy, as absolute proof, but merely as an indication of a struggle having taken place between the de-

veloping brain and its surrounding structures. Occasionally, one will be found which approximates a perfectly oval shape, but measurements show variations in the contour.

find an unequal development in different portions of the skull. As the right side of the body is usually more fully developed than the left, and muscular strength is generally in excess on that side, it would seem



Among 300 heads examined, no skull was found which presented an exact due proportion of the several parts of the circumference to each other, neither was there found a respective symmetry, since the two opposite sides of the skull differ in various degrees of contour, from each other. Particularly will one-sided shortening of the auricular part of the sagittal axis be found indicative of degeneration. Further, any reduction in size of certain important arcs will prove to be of more clinical significance than a reduction of the entire cranial volume. While individual convolutions do not materially influence the external conformation of the skull, their impression is left upon the inner table, which is soft and yielding,—while groups of convolutions have a marked influence upon the formation of the skull. There are two systems of measurement—the craniometrical and cephalometrical. The former is the more exact of the two as the entire skull is bare of its coverings, but in ordinary practice, the cephalometrical is employed.

Arguing from the lack of symmetry in the two sides of the body, we are prepared to

to follow that the left side of the head should present the largest contour. This proves to be the case, the left side being larger than the right in the proportion of three to one. As Brown-Sequard has demonstrated, the left lobe of the brain comes into greater use in its control of the right side of the body, than does the right lobe in its control of the left side. Unequal muscular and cerebral development bear a relation also.

The important point to be borne in mind is that premature synostosis of any cranial suture will lead to a compensatory deformity, as will also arrest in any center of ossification or aplasia, or hyperplasia of the skull, or its contents. Every portion of the skull represents some portion of the brain immediately subjacent. In the case of motor functions, definite conclusions have been reached. Beyond a doubt the areas of movement of the opposite side of the body are located about the fissure of Rolando.

Ordinarily eleven measurements are taken:

1st. *The Circumference:* This is taken around the head on a level with the glabella

and the point just above the external occipital protuberance, Fig. 1, N to L.

2d. *The Naso-Occipital Arc:* This is measured from the root of the nose to the lowest occipital protuberance. Between X and N to S.

phrenology. Changes in the size and shape of the cranium are certainly more common among the insane than the sane. Statistics show that the cranial capacity in the former is below the normal. The brachycephalic seems to predominate over the dolycocephalic

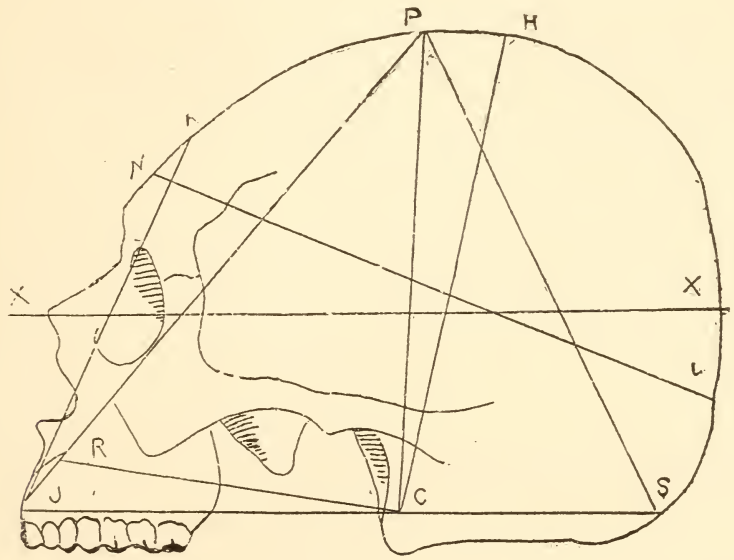


FIG. 1.

3d. *The Naso-Bragmotic Arc:* This is measured from the root of the nose to the bregma. N to P.

4th. *The Bregmato-Lambdoid Arc* (parietal): This is the length of the sagittal suture.

5th. *The Binauricular Arc:* This is measured vertically over the head, between the two auditory meati.

6th. *The Antero-posterior Diameter:* This is taken from the glabella to the occipital point.

7th. *The Greatest Transverse Diameter:* This is taken between the upper portion of the temporal bones at N.

8th. *The Binauricular Diameter.*

9th. *The Two Auricule Bregmatic Radii.*

10th. *The Facial Length:* N to J.

11th. *The Greatest Height:* C to P.

Usually the horizontal circumference and binauricular curve are taken with a strip of lead, or the hatter's conformator, and the curve transferred to paper.

The recent advances in cerebral topography lends a new interest to this branch of

in the exaggeration of diameters. One of the most frequent changes is the thickening of the skull, so often found on post-mortem examination. The middle table of the skull is encroached upon.

Craniometry, in a proper way, is difficult of practice, because of the necessary exactness. Still in many institutions a certain number of cephalometrical measurements are taken upon every patient, upon his admission. The following are some of the conclusions reached by means of these measurements: The skulls of the insane and of criminals are, as a rule, lower than normal. Of 127 measurements made by Zuckerkundler upon insane subjects, 103 showed a typical variation, or more than 81 per cent. Skulls that are below the normal type in volume belong to abnormal individuals. A marked deficiency in any portion of the skull leads to the conclusion that the part of the brain subjacent to it is imperfectly developed. There is a limit of cranial measurements, below which the result is idiocy. Voisin says that the proper

exercise of the intellectual faculties is impossible with a head whose circumference measures from eleven to thirteen inches, and in which the naso-occipital arc measures from eight to nine inches. As a rule, the skulls of microcephalous idiots are oxycephalic, and the occiput is imperfectly developed. In microcephaly, the deficiency of the brain is at the expense of the hemispheres. The hemispheres are relatively larger than normal.

The scope of this paper is too limited to embrace more than a few of the facts in connection with this interesting subject, yet we cannot but admit that at all periods of life the human skull is subject to injuries and influences that result in well-known cranial deformities, and that these deformities, in turn, have a direct influence upon the mental condition of the subject.

Sandusky, Ohio.

SOME CASES FROM MY NOTE BOOK.

BY WM. H. WALLING, M. D.

We are all prone to go to extremes at times. Operative procedure in ovarian and other pelvic disorders has unfortunately been the rule. Recalling many of the cases that have come under my notice in which operations were performed, I am safe in saying that many of them could have been treated successfully by other means than abdominal section.

Electricity, which I largely use in such conditions, is a most potent agent for good or ill, according to its skilful or unskilful use. There are, however, a great number of cases and conditions where this agent is not applicable, by reason of age, idiosyncrasy, inconvenience, lack of apparatus or other sufficient reason, when we must depend upon medication alone. Frequently even local applications, excepting the self-applied douche, are inadmissible. Under such circumstances every addition to our armamentarium of a remedy or combination of remedies, calculated to aid in the treatment of the diseases of the pelvic cavity, should be warmly welcomed by the profession and given a fair trial. In this paper I shall give the results of the use of a combination of three important drugs whose reputation has long been established, but whose use has at times been replaced by more pretentious, but really less effective, preparations.

The remedies under comsideration are viburnum prunifolium, hydrastis canadensis, and piscidia erythrina.

Viburnum prunifolium, or black haw, has held its place as a uterine sedative with many of the older members of the profession, who have witnessed the rise and fall of many other remedies brought out to take its place, but which have fallen into deserved disuse.

Dr. R. W. Wilcox (N. Y. Med. Jour., Dec. 13th, 1890) says of viburnum prunifolium: "It will certainly relieve dysmenorrhœa, if the testimony of thousands of intelligent physicians is worth anything. In the nervous phenomena of the climacteric it will diminish reflex activity, acting in precisely the same lines as the bromides, but without the great general depression of their long continued use." The author found viburnum to be one of the best of remedies for post-partum pains, provided they were not of mechanical origin, thus showing its sedative properties.

From long observation, the writer can fully corroborate all that has been said in favor of viburnum.

Hydrastis canadensis has a wide range of usefulness. It is of undoubted benefit in catarrhal conditions of the digestive and mucous tracts. Powdered hydrastis, either alone or in combination with sanguinaria, is very beneficial as a local application in ulcerative conditions of the cervix.

In two cases that came under my observation, in consultation, hydrastis exerted remarkable sedative powers. One was a case of cancer of the stomach, in which the following formula was used for a long time:

℞ Pulv. hydrastis can., gr. xx.
Pulv. sacch. lactis, gr. 180.
M. ft. chart. No. xx.
S. One powder three or four times a day.

The other was a case of scirrhus of the breast, in which the only application was the tincture of hydrastis, diluted with water, and applied by means of cloths. In both cases the pain was controlled entirely up to within a comparatively short time of the decease of the patient.

Regarding the action of hydrastis on the uterus, Serdtseff (Les Nouveaux Rémedies, Feb., 1891), after making a large number of experiments upon both cold and warm-blooded animals, came to the following conclusions: "Under the influence of hydrastin, the voluntary or rhythmic contractions of the uterus would be increased in their strength and their duration. Hydrastin does not act directly upon the neuro-muscular apparatus of the uterus, but indirectly by the intervention of the central nervous system, and that probably by way of the vaso-motors.

"This drug is of undoubted benefit in all cases of hæmorrhage where it would be, for one cause or another, unwise to await strong contractions of the uterine muscles, and where, in consequence, it is of the greatest importance to attack the bleeding through the uterine vessels."

Piscidia erythrina, or Jamaica dogwood, contains a narcotic principle which acts upon the sensory ganglia of the spinal cord, but does not affect the motor nerves. It also acts directly upon the heart and blood vessels, first increasing and then diminishing arterial tension. Upon relatively healthy persons it produces sound sleep, with but little unpleasant after-effect.

By a skilful combination of the above three drugs, any unpleasant taste being covered with aromatics, the hydrastis being represented by its alkaloid, hydrastin, a compound under the name of Liquor Sedans* has been prepared, and which meets the indications for the above three remedies most admirably.

Its uses cover the field of (as one very busy practitioner said to the writer not long since) "dysmenorrhœa, metrorrhagia, lumbar and inguinal pains due to prolapsus, reflex nervous symptoms incidental to displacements, and leucorrhœa due to uterine catarrh. It is also an excellent tonic."

As illustrating the benefits to be derived from its use in my own practice, I cite the following cases:

Mrs. A. L., age 34. Has been in poor health for several years. Suffers much pain in the back and limbs, and is greatly debilitated by frequent hæmorrhages, her periods coming on every two weeks, very profuse, and lasting four and five days. She was first seen June 1st, 1891. Examination revealed a fibroid enlargement of the uterus. At times she had almost complete procidentia. She has a poor appetite and suffers from constipation and insomnia. Intended making direct applications of galvanism, but the patient could not be seen frequently enough. She was placed upon the fluid extract of hydrastis and cannabis Indica, which proved beneficial in some respects, but in a few weeks they were replaced by the liquor sedans. This relieved the discomfort in a marked degree, the hæmorrhages gradually lessened in volume, frequency and duration, and the patient, notwithstanding an arduous and exerting occupation which compelled her to be on her feet most of the day and evening, improved rapidly, and is still improving. The uterus has diminished in size, the pains are relieved, the flow markedly lessened, and I attribute the good results to beneficial action of liquor sedans.

In September the patient contracted a severe cold, She had suffered, at times, from hæmorrhage of the lungs, and the strain of coughing threatened to bring on a recurrence. Brown mixture and ammon. muriate were given for a short time. She also suffered from night-sweats, and when seen at this time had not been using the liquor sedans. This latter remedy was depended upon as being sedative, antihæmorrhagic and antihidrotic, and she made a rapid recovery, the night-sweats being quickly controlled and there was no hæmorrhage.

In this connection I may refer more particularly to the effects of hydrastis in phthisis. Dr. Cruse, in the Berliner Klinische Wochenschrift, 1891, No. 22, says, in substance: "Its use was suggested by the fact that in two cases of phthisis in which hydrastis (fluid extract) was prescribed for the arrest of *hemoptysis*, which had occurred, the customary *night-sweats did not appear*.

In a third case in which the usual antihidrotics, atropine, agaracine, ergot, etc., were efficacious *only at the outset*, and soon had but a partial, and finally no effect upon the night-sweats, an intercurrent slight

*Manufactured by Parke, Davis & Co., Detroit.

hemoptysis called for the use of hydrastis. As a result of this medication, not only was the hæmorrhage arrested, but *the sweats failed to appear*. Subsequently 30 drops of the fluid extract of hydrastis were administered every evening as an *antihidrotic*, and always with perfect success; even three weeks after the hydrastis was discontinued, there was no return of the night-sweats. In numerous other patients, the fluid extract of hydrastis had the same *prompt* antihidrotic effect."

Case Second.—Miss Y. H., aged 23, complains of pain in the back, headache, and the symptoms accompanying uterine complications. The monthly periods which commenced at 12 years of age, and were always somewhat painful, have grown more and more so during the past few years. The flow lasts five days and is excessive of late. Is anæmic and suffers from leucorrhœa. First seen May, 1891. Local examination not attempted. Placed upon liquor sedans, one teaspoonful four times a day at first as the period was near at hand. The remedy was given for its sedative effect, as I did not expect any other immediate result. She was faithful in its use, passed the period with so much less pain as to express herself very much pleased, and the flow was lessened.

Directed the use of the remedy, for two weeks each month, commencing one week before the period, and continuing through it. Also placed her upon the elixir of the succinate of iron, one teaspoonful three times a day, as a continuous remedy.

In regard to the latter preparation, I may say that it has given me great satisfaction in every case in which it has been used. One very notable instance occurred in October. A lady under my care for nervous prostration from over-work (she being an opera singer), required among other things, iron in some form. She very strenuously protested against its use, as she said it always disagreed with her, but yielded to my requirement, that the succinate be tried. Not only did it not produce the unpleasant symptoms which she had formerly experienced while taking iron, but quite the reverse, and she rejoices to find a form of this drug that agrees so well with her, and continues its use as directed with great benefit.

At the present writing, case number two is, to all appearances, well. No pain at the periods, no headache, general health and spirits normal. This after only six months of treatment, with liquor sedans and the elixir of the succinate of iron.

The third case was that of Mrs. R., age 23. Has had three conceptions. The first resulted in a premature delivery at 7 months, with the child still-born. The second was aborted at the third month, mechanical means being used by the patient. The third miscarried at the second month without any interference. She suffered when first seen, in July, 1891, with profuse leucorrhœa, backache, headache, etc., and at times with severe bearing down pains and sciatica. Digital examination reveals an enlarged uterus, and the speculum shows a uterine catarrh. The diagnosis is subinvolution and catarrh. Applied a solution of carbolic acid and glycerin to the cervical canal, and directed vaginal douches and a decoction of white oak bark. As an internal remedy gave liquor sedans. Improvement began with the first period that followed the administration of the remedy. The general tone of the system was soon better, and she is still improving. The uterus is much smaller and the other symptoms markedly abated in every respect. In such conditions I frequently use electricity with most excellent results, but where patients cannot be seen frequently or where they cannot afford the expense of such treatment, such a remedy as the one under consideration is of untold value. Then, too, there are many patients coming under observation, where local examination or treatment is not admissible, in which liquor sedans meets all the requirements, thus saving both the physician and patient. Especially is this the case in dysmenorrhœa of young girls, when every other means should be exhausted before attempting local treatment.

As a fair sample of this class of cases, I will cite the following: Case 4.—Miss K., aged 18; general health fairly good. Complains only of great pain preceding and at the onset of the catamenial period. She came under my observation just previous to one of her periods, and while on a visit to some friends. Upon my being called, she asked me for a hypodermic injection of mor-

phine, stating that her physician always gave such treatment at such times. To this I objected, and instead prescribed liquor sedans, one teaspoonful four times a day, and to continue the remedy for several days after the flow ceased. Also, to keep the remedy on hand, and use it regularly commencing about ten days before the expected time. The effect upon the present period was marked. The pain was greatly lessened, the flow being free. The second period showed still more improvement, and now, after five months of steady use, as directed, the patient considers herself well, the last period according to recent advices, being painless.

Case 5.—Mary R., aged 18, colored domestic. Periods commenced at 14 years of age, and regular every four weeks up to within a year. She suffers no pain at such times but vesical tenesmus is severe, with a recurrence of the periods every two or three weeks, very profuse. Suffers from the general symptoms, backache, headache, palpitation of the heart, which greatly alarms her. Is very anæmic. Digital examination not attempted. Gave liquor sedans and directed rest. The next period was passed with less pain, and the flow perceptibly lessened. The second, which appeared later than usual, showed still greater improvement, and now after nine months use of the remedy, using it about two weeks every month, the patient is well.

Case 6.—This patient was seen in July in consultation, in a neighboring city. A Mrs. T., age 34. Has had repeated miscarriages. Complains of great "bearing down." Constipated, vesical tenesmus, backache, general malaise, severe leucorrhœa. Examination reveals an enlarged uterus, which is movable; sub-involution; uterine catarrh. Recommended carbolic acid and glycerin as a local application, vaginal douches of white oak bark decoction, and liquor sedans as a tonic and sedative, one teaspoonful three times a day. The case has made satisfactory progress, and bids fair to become entirely well, according to reports made.

In reviewing all the cases that have come under my observation, and that of other practitioners who have used liquor sedans, I am more and more impressed with the great efficiency of the combination, in many cases of ovarian and uterine troubles, when operative or some local treatment is contra-indicated or inadvisable. In fact, it is better, in very many cases, to treat by appropriate medication alone, and use all reasonable means, before resorting to vaginal examinations and applications.

The preparation under consideration in this paper is both safe and, as a rule, certain in its beneficial effects, and one which can be confidently relied upon in a large number of cases such as have been briefly outlined above, and where opiates will be sooner or later resorted to, without some such substitute.

2009 Arch Street, Philadelphia, Pa.

THE ELIXIR IRON SUCCINATE.

BY WM. THORNTON PARKER, M. D., M. M. S. S.

Dr. Henry Hartshorn, of Philadelphia, in his excellent hand-book, "The Essentials of the Principles and Practice of Medicine," published as early as 1869 (and still a valuable hand-book for the busy practitioner), in considering the cause for the very general discontinuing of blood-letting by the profession, mentions among other things a "change in average human constitution occurring under the artificial habits of civilized life." Where our predecessors in the art of healing found the lancet a valuable and reliable aid in the treatment of disease, the medical practitioner of to-day seeks patiently to obtain what is, in the present age of medicine, so necessary, viz., efficient tonics and restoratives. "The chief end of all knowledge in the art of Physic," says Van Swieten, "is to restore health to the sick, and hence Celsus has justly observed '*ut alimenta sanis corporibus agricultura sic sanitatem aegris medicina promittit.*'"

A large proportion of the patients presenting themselves to the general practitioner for treatment undoubtedly require tonics, and while the cause of the disorder may be evident and the nature of the remedy clearly indicated, how and where to obtain a reliable tonic is often a veritable *questio vexata*.

Dr. Wood, of Philadelphia, in his excellent Treatise on Therapeutics says: "There are

certain substances in Nature which, when taken internally, act upon the nutrition of the various tissues so as to restore lost tone, not by calling into play the vital principle of contractility, but by increasing the power in the part. Such substances are known as tonics. They are, of course, indicated by debility dependent upon impaired nutrition. They are especially valuable in convalescence from acute disease; during the progress of the disorder they more often do harm than good."

Of the tonics known to the profession, iron occupies the most important position. Very largely found in the various articles of food and drink, it is also an important ingredient of the blood itself. When, however, the supply from any cause is insufficient, or the power of digesting and assimilating it is impaired or an abnormal excretion of it occurs, or by direct discharge it is drawn off from the blood as in hæmorrhage, a less than normal amount of it exists in the body. When this is the case, the condition ordinarily known as anæmia existing, the circulating fluid contains comparatively few red discs. It is this state which constitutes the great indication for iron. Under its use if the cause of the anæmia be prevented from operating continuously, the color returns to the cheeks because there is an absolute increase of the hæmato-globulin in the blood.

In 1882, Dr. Francis H. Williams, of Boston, read at the meeting of the Massachusetts Medical Society a paper entitled "A Study of the Action of Iron." He stated therein that while iron is a valuable tonic in anæmia, it has without doubt poisonous qualities; "that the symptoms which it causes come chiefly from the alimentary canal." The very general opinion of the medical profession is favorable to the use of iron and strongly sustains its position as the remedy *par excellence* in all forms of anæmia. How much iron is absorbed into the blood is an interesting and important question. Ringer in "Handbook of Therapeutics," 1886, says: "The increase of iron in the urine after administration being very slight, it has been concluded very little passes into the blood; and the fact that almost all the iron taken by the mouth may be reobtained from the fæces, seems to strengthen this view; and an extended knowledge concerning the elimination of metals from the body does not tend to show that this conclusion is fallacious."

The Medical News, April 17th, 1886, contains an article on the assimilation of iron which states "much difference of opinion has existed as to the methods of action of ferruginous tonics. That their use is of advantage is a matter of daily observation, but many difficulties arise when we attempt to explain their mode of assimilation, for apart from the fact that nearly if not quite all the iron so ingested is recoverable in the fæces, we are met with the equally perplexing fact that iron salts when introduced into the blood stream cause toxic symptoms analogous to those induced by arsenic."

Bartholow in considering the physiological action of iron in his treatise on Materia Medica, states that although metallic iron is inert, yet in the stomach it enters into combination, and acquires molecular activity. If iron is absorbed by the stomach or intestinal canal probably it is as an albuminate. The stools under a course of iron become brownish and even black, a result which indicates that at least a large part of the metal taken fails to be absorbed; and since it has been shown that whether taken by the stomach or injested into the blood elimination takes place by the intestinal canal, it remains uncertain how much is excreted or is merely discharged unaltered in the fæces. Iron is not a substance foreign to the organism. Chemical analysis has demonstrated its constant presence in the blood, in the gastric juice, chyle, lymph, bile, in the pigment of the eye, and in traces in the milk and urine. Unquestionably it performs a very important office in the rapid construction of red blood globules when it is administered in anæmia. Without it hæmatin is not found, and the red globules diminish in number. By its mechanical use we furnish to the blood a material which it needs. In health a mixed diet contains sufficient iron for all the purposes of the economy. Blood being improved in quality by the administration of iron, the tissues are better nourished and all the functions are performed with greater vigor. The physiological action of iron is not limited merely to the construc-

tion of red blood, and there is no intolerance to its presence in the stomach, it promotes the appetite and invigorates digestion. By increasing the disposition for food and the ability to dispose of it iron acts as a stomachic tonic.

We find upon consulting our text-books on materia medica a great number of preparations of iron, and in drug stores a still larger number of proprietary articles. Many of these preparations are positively injurious when taken into the stomach, and only a very few are of any decided benefit to our patients when employed as ferruginous tonics. We frequently run across the most repulsive and acrid mixtures prescribed as *tonics* for delicate women and children, one dose of which would be enough to nauseate a strong man. Bartholow gives thirty-one official preparations of iron, not to mention numerous unofficial preparations. Ringer mentions a much smaller number, but his testimony in favor of this valuable tonic is one of the best chapters ever written on the subject. Whatever may be the doubts of a few physicians as to the value of iron in the practice of medicine, it would be an unfortunate practitioner who would for a single year of practice withhold this invaluable remedy from his patients. Opium, quinine, iron, and calomel, must for many years to come continue to be our leading remedies; and we can safely assert that no other medicines ever have accomplished so much for the relief of suffering, and it is doubtful if better will ever be discovered.

The prejudice against iron with some medical men has arisen on account of the difficulty in procuring reliable preparations, convenient and agreeable for administration and non-injurious to teeth, stomach, and bowels. Undoubtedly such preparations are not common; indeed, there are only a few which can be used with confidence. Iron pills are perhaps the worst preparations for the treatment of patients; and many of the elixirs—some, indeed, enjoying a great reputation as tonics —are no better in their action upon the stomach and bowels. We are greatly in need of some *reliable* preparation of iron, notwithstanding the fact that the list already is beyond reasonable limit. What is required is some solution which will remain uniform in strength and not be liable to undergo destructive changes in our varying climate. We need an elixir which can be given without causing distressing symptoms in the head and stomach, and one which will not be followed by annoying and injurious constipation. The iron must be easily soluble, must be agreeable to the taste for the use of women and children, and be convenient to administer; and last, but not least, must be in such a compound as will not readily discolor the teeth.

Such a preparation, I have reason to believe, has been produced in the Elixir Iron Succinate ($F_2H_2C_4H_4O_4$). It is the only perfect ferruginous preparation, in that it is a palatable, stable, neutral, oxygeno-ferric compound, devoid of albuminous or nitrogenous mixture—a compound radically different from any hitherto produced, and embodying not only all the advantages of, but many that do not accrue to, any other preparation of iron, with none of their disadvantages. It neither palls the appetite nor clogs the digestive apparatus; is the only preparation containing appropriable oxygen available in a nascent state, and is an effective ready-made antidote in arsenical poisoning.

Succinate of iron marks an era in the progress of medical science. Twenty-six years ago we drank the common iron tonic made by subjecting pieces of metal to the action of water; we can to-day make use of the most elegant preparation known, prepared by Parke, Davis & Co.—the Elixir of the Succinate. The advance made is one worthy of serious attention, for the overwhelming evidence of the medical profession is in favor of iron as a valuable tonic—*a few opponents, notwithstanding*, to the contrary.

The Succinate (hydrated), beyond all others, is the most perfect and most palatable preparation of iron yet offered the medical profession. It is a tasteless *succinate of the peroxide of iron* in combination with an elegant elixir.

It is permanent under all circumstances, in all temperatures, climates, etc.; *a neutral salt* that is quickly changed by the digestive processes, the greater part of which is almost instantly assimilated on reaching the duodenum, where the effects of iron are most required.

All other preparations of iron undergo marked chemical change in the stomach, but their assimilation is thereby in no way enhanced. Indeed, their sole value appears to be through an action (mechanical) similar to that of the cellulose of starch food—one of assistance to digestion merely, while themselves non-assimilable and practically inert. This has been repeatedly proved by physiologists, who have again and again recovered all the iron, ingested by the mouth, from the excretions. Hence, other preparations derive their therapeutic value from their chemical organization—the combination with acids or alkalies.

In fact, the absorptive and assimilative power of the economy as regards iron is limited, though the Elixir Succinate is capable of being taken up in far greater proportions than any other preparation.

Other and special advantages of Iron Succinate are:

It is neither astringent nor styptic.

Instead of promoting constipation, it has a tendency, under all circumstances, to a laxative, or rather aperient, effect.

Aside from a general tonic action, it is a decided hepatic and pancreatic stimulant, increasing the flow of the secretions from these two great organs, because:

Iron Succinate contains more *appropriable oxygen, in a nascent state, than any other available therapeutic agent*, nitric acid perhaps excepted—but the oxygen of NO_3 is too easily taken up where it is not wanted, whereas the oxygen in Succinate of Iron is only appropriated when required, and if not needed, is not appropriated at all.

For this reason, in all those cases of liver trouble where nitric and hydrochloric acids are usually prescribed, the Succinate will be found far more efficacious. Hence, also, of all ferruginous preparations, the Succinate is the best for malarial cachexia, or other conditions where the blood globules are diminished or need rehabilitation. Likewise, if desired, it may be employed in febrile conditions regardless of the pyrexia present.

Iron Succinate is of special value in the treatment of gall-stone, more particularly in the prevention thereof. This is due to the fact that cholesterine contains only a small amount of oxygen—from 1½ to 2 per cent., which is less than that of almost any known substance. It is, therefore, rational to suppose that a highly oxygenized compound will secure the best results. Thus this preparation (deservedly) possesses a high reputation, not only as a preventive of gall-stone, but as a remedy for cholesteric diathesis, being in this respect immeasurably superior to Carlsbad salts, Marienberg waters, the Salzburg Springs, etc., etc.; and it possesses the advantage that it may be taken indefinitely without disturbance to digestion, appetite, or in any way militating against the welfare of the economy.

The combination of Per-Oxide of Iron with Succinic Acid, both of which are extremely rich in oxygen, secures the greatest amount possible of the latter.

In leuco-phlegmatic subjects, where there is a tendency to redundance of fatty tissue, and where there is reason to suspect a deposit of the great disorganizer, cholesteric fat, may be forming about the heart and arteries, or in other structures, it is simply invaluable; hence it may often be prescribed with decided advantage for persons having a tendency to obesity, and thus save the adoption of a rigid (and often injurious) system of diet; thus in a certain class of cases it constitutes a veritable "Anti-Fat."

In the Iron Succinate is had, *already prepared*, an immediately available antidote in arsenical poisoning.

The dose is from *one* to *two* teaspoonfuls, thrice daily, a half hour after meals. Should this dose result in excessive blackening of the fæces, it is evidence that more iron is being ingested than the economy is capable of assimilating: in such case the dose should be reduced until assimilation is perfect, and then slowly but gradually increased.

In my own practice I find its delicacy and agreeable taste makes it exceptionally useful in the diseases of infants and children. Every practitioner finds it difficult to prescribe a tonic for sensitive children which they are able to take with some hope of benefit and which is not so nauseating as to make its prescription a punishment. But we have in the Succinate a preparation which up to the present time has been greatly needed, but never provided. Its valuable properties in this department alone will be

fully appreciated. The next indication for its use is in anæmia and chlorosis of young women. Its convenience, agreeable taste, and positive chalybeate value, make it peculiarly useful in the treatment of a large class of our patients. Anæmia is becoming a fearfully common complaint, not only in its milder forms, but in the more serious conditions. Unquestionably so far as medicines are concerned, iron stands first and foremost in our list of remedies for this disease. But heretofore the difficulties of obtaining a reliable and agreeable preparation have been very great. The Succinate is also useful in many forms of skin disease. I am using it at present in a case of chronic eczema where almost the entire epidermis of the body is involved, and where such a preparation as the Succinate is the only one I can employ successfully. In such a case, it is valuable for its hepatic and pancreatic action. One is able to use this remedy in the treatment of anæmic women during the period of gestation. We will find it valuable in the treatment of the anæmia of epileptics, where it can be prescribed when other preparations of iron cannot be used at all. I am now trying its effects in a case of enlarged tonsils, and so far with very favorable results. In scrofula it is exceptionally useful, and also as a tonic in rheumatism. Its gentleness and readiness of assimilation make it likewise the very best tonic in consumption.

Combined with Syrup Trifolium Compound, the Succinate of Iron will be found without a rival in the treatment of rheumatism and the various forms of syphilis. For the anæmia of chronic malarial poisoning, it is also useful. In the treatment of erysipelas it will be found more convenient than any other preparation of iron. In pulmonary hæmorrhage, hæmorrhage of the bowels and in other intestinal disorders, and especially in chronic diarrhœa the Succinate is indicated. In diphtheria and scarlet fever it will be found convenient and reliable and can be given freely as a tonic in the convalesence of diseases of children and adults.

When from any cause the system has become run down and deficient in strength, Succinate of Iron will prove invaluable in imparting tone to the system, improving the digestion, increasing the appetite and in enhancing the functions of assimilation and blood-making, and in controlling abnormal nervous action. It is the remedy *par excellence* for the commonest of all American disorders, "neurasthenia."

There is but one word of caution in the exhibition of this remedy and that is to begin with a small dose. In our own experience, a half-drachm is in many cases sufficient for an adult dose at the commencement of treatment, gradually increasing until one or two teaspoonfuls can be taken.

Salem, Mass., June 22d, 1891.

COCAINE — SOME PRACTICAL OBSERVATIONS ON THE EXHIBITION AND EFFECTS OF COCAINE.

BY M. K. BOWERS, M. D.

During a period of about one year, dating from September, 1890, the writer has had a somewhat practical and interesting experience with the now popular and potent agent which constitutes the subject of this article. The history of the case through which my special attention was directed to cocaine and its qualities is of very considerable interest, but which I cannot presume to fully discuss in this limited paper; a very brief epitome being amply sufficient for my introduction.

On an afternoon of September, 1890, while making a visit in the southern section of the city, I was called by a friend to see a lady who was suffering intense pain, which had continued unabated for some hours; a brief statement from her, and a hasty examination disclosed the cause to be a large cancerous tumor, "evidently a cylindrical epithelioma," located in vaginal canal at about juncture of middle and lower third, with posterior attachment. She had suffered from this condition for a period of about three years, the growth of the tumor being rapid and accompanied by attacks of prostration and excessive pain during three months prior to this time, September, 1890. She had persistently declined surgical interference, and the only treatment employed for fully one year was the use of agents to alleviate the pain which occurred at frequent intervals, and was of the most violent character. The remedy mostly employed was morphia. This agent being used for a

long period, was now required in inordinate quantities to bring about the desired relief; its administration being invariably followed by a train of distressing sequelæ, headache, nausea, constipation, etc. These conditions had recently become so prominent as to cause the patient great distress, but withal were tolerable, compared to the pain, which the agent producing them was the medium of relieving.

Always anticipating these sequelæ with anxiety, and desiring to avoid them, she earnestly inquired, on the day indicated, if no other means could be devised for her relief, which would not be followed by the distress induced by the use of the old remedy, morphia. Giving a somewhat evasive and non-committal answer, I proceeded to do the best I could for her, with the means at my immediate command. Having in my gynæcological case about f ℥ ij of a ten-per-cent. solution of cocaine, prepared from the ordinary yellowish amorphous powder found in the shops, I at once made a thorough application of the solution to the surface of the tumor and adjacent parts. The entire surface of the tumor was of a whitish, granular hue, and intensely painful to the slightest touch. The application of the solution immediately produced a very considerable sensation of what the patient termed a stinging, burning, which lasted for perhaps 8 to 10 minutes, when gradually a directly opposite cooling sensation was exhibited. The pain steadily abated and at expiration of half an hour was entirely absent. No nausea or unpleasant sequelæ of any character followed. The patient remained comparatively free from pain and comfortable for nearly three days. On evening of third day I was hastily summoned to see the patient, and found her in same condition as at previous visit. I at once resorted to same course of treatment with similar results, with the exception of a more decided exhibition of the sensation of burning than at the first application three days prior; the relief afforded was, however, more decided, and continued for a period of five days, when it recurred with all its former severity. During this interval of five days, my attention was directed by a friend to a *crystal form* of the remedy employed in the local treatment of my patient. I secured a quantity of this preparation, which I was informed was a foreign product, bottled and sold by an eastern firm, and when again called to see my patient, the third time, when her pain was very great, I at once proceeded to use a ten-per-cent. solution, made from the crystals. The result was a most gratifying surprise, absolutely no burning or stinging ensued, and in less than five minutes after the solution was applied to the parts, she was entirely relieved from pain.

In every subsequent attack, with but one exception, where I could not secure crystals, I employed this form of the agent, and in each case with entirely similar and satisfactory results. On the occasion on which I could not secure crystals promptly, the powder was used as in first instance. The burning was again exhibited, but not so violently as before; the relief from pain was slow in coming, and of brief duration. At this time some nervous symptoms and a feeling of uneasiness ensued, which was entirely absent at any former or subsequent attack of pain. The crystal form has been employed in every attack for a period of twelve months. The attacks occur at longer intervals, and, notwithstanding a comparatively rapid increase of the tumor and general decline of the patient, she is spending her days in comfort; I have recently ordered the application of the solution at the first premonition of an attack; thus, for a period of one month in which but three (3) attacks occurred, obviating successfully her former violent suffering.

In the entire period, now about one year, during which the treatment described has been pursued, there has not been exhibited any condition contra-indicating its use, with the exception of the sequelæ, following application of sedative made from powder, there have been shown only the most happy effects from its administration.

It is not within the province of this limited article to discuss the individual chemical properties of the various form of this agent, but rather to simply state how it has acted and how the several products have proven their relative merits, in my brief experience, in which they have been put to a practical test, and where the results have thus far proven that the crystal form is superior,

being, as demonstrated in my case, practically free from any acrid or irritating principle which in any way interferes with its benign, sedative effect. Whether my case has a parallel or not, I have not the pleasure of knowing. The agent, in its improved crystal form, has accomplished a most happy mission by affording relief to my suffering patient, without being followed by the various annoying conditions that are usually present in the employment of other sedative agents, particularly when their use is prolonged.

During this same period of the last year I have come in contact with several cases which have most forcibly demonstrated the effects of this subtle product, and particularly showing the circumspection requisite in its use in general practice. The cases have been of intense interest and worthy of detailed study, which it is not possible to do in this article, a brief statement of three cases only being admissible.

One instance being in the case of a married woman, aged 35 years, who came for a remedy for excessive pain in a cavity from which a large ulcer had been extracted on preceding day. She was given a prescription for 1 fluid ounce 10-per-cent. solution of cocaine, *crystals specified.* She reported several days subsequently, stating that she enjoyed almost immediate relief, and with it a peculiar and pleasant exhilarating sensation. Her pain being entirely relieved, the case was dismissed without further thought. Several weeks subsequent to this, my attention was directed by her druggist to the frequency of the renewal of her prescription for the solution, she having it refilled almost daily. An immediate investigation at once proved that she was using it secretly for the pleasurable effects it produced, and that she was rapidly becoming a helpless victim of its seductive influence. Her family were alarmed at her frequent peculiar actions, but could not conceive what caused them. While formulating a plan of procedure, I was consulted by her husband. The case was plainly stated to him, with instructions how to proceed. She was warned as to her danger and the ultimate results of her course, and, being an intelligent and practical woman, she at once seemed to appreciate her position, and began to battle with her already powerful and potent foe, and finally, only after a most determined effort, succeeded in relinquishing her brief but rapidly growing and dangerous habit.

Another most interesting case was that of a professional man, a resident of a central Pennsylvania town, who used cocaine both in powder and solution, personally, for the relief of pain, induced by a condition which this article is not intended to discuss, being only interested in the effect produced by the agent in general. The drug was used daily for a period of about three months when he was practically restored, but found himself a victim to the habit of the inordinate use of the means resorted to for relief. He had used the agent in enormous quantities, and at the time indicated was so under its influence that his case was very grave. When not under its spell he readily appreciated his dangerous position, and determined to overcome the practice. These resolutions, backed by a profound desire to be free from the habit, were made again and again, only to be broken when the overwhelming longing for the happy influence of the drug would assert itself. Finally becoming alarmed and desperate, he consulted his friends, and among them the writer. All possible aid and encouragement was given him. He was removed from his home, surrounded with new scenes, and when the old mania for the use of the drug was exhibited he was at once placed in such position that its use was impossible, and in this way after a most heroic, determined and long continued effort he finally succeeded in breaking away from his foe, and now is entirely free from it, with no apparent indications of a return to the habit, and happily no bad after effects. The history of this case is of intense interest, and did space or province of this article permit, would alone furnish a theme for a prolonged study. His own intelligent and graphic confidential statement, and on several occasions very personal observations of his case, demonstrate most vividly the tenacious, seductive and peculiar influence and power of the drug when used to excess. The one great feature in this instance was the abnormal buoyancy of mind and and activity of thought induced by

its use. This gentleman is normally possessed of a brilliant intellect, and is a capable conversationalist and writer. But when under the mystic spell induced by cocaine this faculty of thought and expression was accelerated to a degree bordering on the sublime. It was not an exhilaration similar to that produced by the ordinary intoxicants, nor that of morphine or chloral, but a condition peculiar to itself, and withal most profound. He was capable of advancing a line of thought or argument on any subject suggested, which was a surprise to the few intimate friends conversant with the case, and more than to them, a surprise to himself, when told of it subsequently. His treatment of subjects written upon when under the potent influence evidence expressions of thought and flights of fancy which he could not believe were his own when in normal state. Insomnia, accelerated and labored heart action accompanied with a vague feeling of uneasiness and, at times, of dread, with a desire for quiet and solitude invariably followed the use of the drug, which conditions abated after sleep, whether of long or short duration, a sleep of even half an hour being sufficient to restore the faculties of both mind and body to their normal condition. At each awakening honest resolutions were made to forever resist the seductive foe, only to be broken in a few hours. This gentleman, residing in an interior town, frequently could not procure the agent from local drug stores. He then had a professional friend purchase and send him large quantities from the city. Being ignorant of the facts in the case, his friend thus unconsciously aided him in his destructive and dangerous practice. Finally becoming suspicious by the order increasing in quantity and frequency, an investigation was cautiously and secretly made, and the facts disclosed, and by the honest, united endeavors of the victim and a few friends he finally was rescued from his critical position.

The tendency to peculiar fertility of mind and unusual power of conception of ideas and their versatile expression was subsequently discovered to have been exhibited in the case of the woman alluded to, who for a brief period practiced the cocaine habit; the peculiarity in this case being the character of sentiments induced by the influence of the drug, the conditions in the case were most interesting, and are perhaps most clearly explained in the language of her husband, who says that the actions and expressions of his wife ranged from the "sublime to the ridiculous." Now dwelling on the most noble and excellent theme, and again on such embarrassing and ridiculous ideas, that when in normal state would not be entertained, much less expressed. A point noted was, that the more under the spell of the drug, the more profound and pure were her thoughts.

In the case of the patient in which the solution was, and is now, used per vagina, there has been at no time such effects exhibited, more than a sense of complete rest and tranquillity of mind and body, which is steadily maintained by the regulated use of the drug.

The foregoing cases are replete with intense interest, and have most practically demonstrated to the writer the power for good; and, withal, the dangerous character of this remedy, and the dangers incident to the indiscrimate or careless use of it, have most vividly pointed to the caution and circumspection necessary in its employment.

About two months ago my attention was directed to the use of cocaine in the treatment of opium habit. A few days later there came into my hands a very grave and pronounced case of this distressing habit, in a woman aged 38 years, who has been a confirmed victim for a period of about four years, and who for the past year has made a heroic effort to be relieved. She has been treated by two local physicians, who exhausted their resources without avail. The nostrums advertised by charlatans have had their inning, but all to no perceptible purpose or benefit. Finally, as a *dernier ressort*, with doubtless little hope, she came to me at the advice of a friend. Knowing that my predecessors, both of whom are competent, the one a prominent gentleman, had done all that I might be able to do, I at once determined to resort to cocaine. In the hope that I might change the medium employed in the pernicious practice of my hopeless patient, I looked upon the case and the agent used to excess, with the remedy about to be em-

ployed, as a typical case of "diamond cut diamond," with perhaps little or no difference which agent would prove the final victor in the struggle. A line of treatment very similar to that described by Dr. Overhall, in the Medical Summary, Oct. and Nov., 1891, was pursued with such other treatment as the case indicated. This course is now being pursued. While I am not by any means in a position to report a cure, I am most happy to say that there is practical benefit exhibited, and I am confident of ultimate success. There are many important features in this case which are of great interest, but which I cannot stop to discuss. I only notice the case incidentally, to add my practical testimony to the fact that I believe that, judiciously employed, this agent can be made a great factor in the opium habit, and that it fully merits the praise bestowed upon it by those who have used it in such cases, and now indorse it.

I desire to note briefly the happy effects of the use of cocaine in a number of obstetric cases in which I have employed it. My first case being not unlike the case of vaginal cancer, before cited—rather an accident or experiment.

Being called to a labor, I found on attempting a preliminary examination "per vagina," that there existed intense tenderness of the parts, which was so pronounced that the slightest touch induced intense pain and nervousness, the woman stating that it was absolutely unendurable; having known her for some years, and attended in two former labors, I knew it was not due to diffidence or fancy. An examination disclosed a most violent pruritis, which had become noticeable a few days prior; I resorted to various methods suggested for local relief, with little or no success, the labor apparently progressing rapidly, I anticipated trouble at its termination, and determined to try cocaine, I ordered a quantity of a 15-percent. solution, which I at once applied by means of absorbent cotton, first to the vulva, and finally to vagina canal. The effect was most happy in a very brief period, the intense burning, smarting pain ceased, the parts were impervious to manipulation, the labor progressed normally, and instead of the usual great pain exhibited, with the descent and expulsion of the fœtal head, there was comparatively none, and absolutely no discomfort induced by the manipulation necessary to conduct the case; an unpleasant complication was a partial, but very decided adhesion of the placenta, which condition necessitated an unusual amount of disturbance of the parts. A thorough application of the solution was again made, when after about ten minutes time, the case was successfully concluded, with little or practically no inconvenience to the patient, and no subsequent unpleasant results.

The signal success from the use of the agent in this case induced me to make further practical tests in other cases where from any cause there was exhibited tenderness, or excessive pain. In every instance the result has been most satisfactory.

In a recent case of abortion, doubtless purposely induced, there existed intense acute inflammation of vaginal canal which caused great pain on manipulation. The cocaine solution was used with a very speedy and most happy effect.

In several cases of labor in young women in which there was exhibited intense nervousness, and special fear of the final pain, a condition possibly augmented by the explanation of its horror, by that benign sympathizer (?) the next door neighbor, who has had babies, and for that matter should have them all, I have used the solution, and by its potent influence, had the satisfaction of disarming the ordeal of labor of at least a very considerable amount of its anticipated horrors. I do not presume to record painless labors by the use of cocaine, but I do know that with it I have succeeded in making the suffering incident to labor a very much less prominent and distressing feature. I have employed it in a large number of cases, and in each case there was exhibited a satisfactory effect, and in no instance have there been any unpleasant or injurious results.

The foregoing statements briefly narrate my experience with this agent, and appreciating the good effects derived from its use in my hands, I submit the same for the approval or condemnation it may merit at the hands of my fellow practitioners.

In a recent review of all the cases in which

this product has been used, either as a habit or in regular course of treatment, there has been exhibited considerable evidence that cocaine is an agent in the use of which there is requisite the utmost caution, not only from the fact that it is a poison and an agent from which dangerous habits may be acquired. These features are of sufficient gravity to demand the most vigilant care, and to them there is coupled another no less important condition, which even in my limited research has been exhibited to such an extent that its importance is clearly indicated. I refer to the peculiar exhibition of aphrodisiac effects.

This feature has not been present to a perceptible degree in each case where the agent was employed, but in a sufficient number to indicate its liability to occur, and hence to show the importance of the utmost care and precaution necessary in its use. This effect has been exhibited more particularly in females, in one case, that of the married woman before described, to a very considerable extent. This feature in her case, voluntarily stated by her and corroborated by her husband, is of interest. She is an eminently respectable and modest woman, whose life and conversation have ever been chaste and decorous, but when under the influence of cocaine, of which she was for a brief period a victim, she would invariably utter expressions and do things of which she would not even have a thought when in normal state. This indicates the fact that the normal propensities of individual character are not only excited by the drug, but that traits and fancies foreign to the mind and nature are induced. This fact, in my opinion, makes the aphrodisiac effect of this agent the more interesting and of special gravity. This effect was exhibited in the case of the professional gentleman noted, particularly in the early stage of its use. The feature gradually lost its prominence, and finally was entirely absent, in his case. In the case of the woman suffering from cancer there was at no time shown this effect. This woman is aged 48 years, and had passed the menopause period about two years before the vaginal trouble was first exhibited. The woman now under treatment for opium habit has also passed this period, and thus far no erotic symptoms whatever have been presented. In no single instance where the drug was used in labor cases have any such effects been shown. In not more than two other instances have I noted to any extent this effect. Of the four cases in which it has been noted, three were females, in each of which cases, so far as I can learn, the effect was more pronounced than in the one male in which I have noted it. The one paramount feature of it all is, that this effect is likely to be induced; and the great lesson to be deduced from this fact is obvious to every honoroble practitioner. The indiscriminate employment of an agent which is capable of producing this effect is fraught with danger, not alone to the patient, but withal to the reputation and character of him who employs it. My final conclusion on the subject is, that while I prize the agent highly for its benign influences, I must associate with its use a care and circumspection limited only by the power for good, and withal for evil, which this most subtle product possesses.

Harrisburg, Pa.

A CLINICAL LECTURE.*

BY DR. DELAFIELD.

CASE 1.—This man is 26 years old. A week ago last Wednesday, while at work, he had an attack of vomiting, accompanied by pain over the stomach and abdomen, and by chilly sensations. The next day he continued to vomit and feel sick. A physician saw him, and gave him turpentine in rather a liberal way. He administered it by the mouth on sugar; he gave him turpentine stupes over the abdomen, and also gave him the drug by the rectum. After following this treatment for a couple of days, the man noticed that his urine was bloody. His urine was examined, and found to contain some red blood cells and albumen; no casts.

This is the straightforward history of a person suffering from acute congestion of the kidney, due evidently to turpentine. The original attack he complains of was probably one of acute indigestion. When the albumen has entirely disappeared from

*At the Vanderbilt Clinic, New York, Nov. 12th, 1891.

his urine, as it no doubt will in a few days, the man will be able to go back to work. Until that time I would keep him quiet and on a milk diet. No other treatment is necessary.

Case 2.—This man is 55 years of age. He states that he suffers from dyspnœa, headache and sleeplessness, and from dropsy of the feet. His urine has a specific gravity of 1010, and contains 50 per cent. of albumen. There is some hypertrophy of the left ventricle and a slight murmur at the apex. There are no râles over the chest, so that the dyspnœa is probably due to contraction of the arteries.

The man evidently has a chronic nephritis with exudation, and the disease has taken the form of successive attacks. He states that a year ago he had a similar attack to this. The chances are that the man will get over this attack of symptoms—not the nephritis—and go on until he has a similar attack. As for treatment, he should go to bed and be put on a fluid diet, preferably milk. For medicine, he should be given potassium iodide, with the idea of dilating the arteries. The contraction is not great enough for the use of chloral hydrate or nitro-glycerin. If he was a patient in good circumstances, after you had relieved him from his urgent symptoms it would be well to send him to a warm climate for the winter. Of course, in sending away these patients you must do it, to a certain extent, at your own risk, for it is quite possible for a patient with such a nephritis to suddenly get worse and die, instead of improving, at the place you send him to. The physician is likely to be blamed for this, and it is one of the risks you must take in the practice of medicine.

Case 3.—This man is 50 years old. He was in good health until one year ago. Since then the prominent symptom has been the loss of flesh and strength. Excepting this, the man can hardly be said to be sick. No headache, no dyspnœa, no vomiting, no dropsy. His weight has decreased fifty pounds within the past year, and he feels quite unable to make any exertion. The physical examination of the lungs reveals only a moderate degree of emphysema, with no bronchitis. The heart is apparently normal. There is a slight increase in the tension of the radial pulse; it is a small, feeble pulse. The heart is not hypertrophied. The urine has a specific gravity of 1024, and contains a trace of albumen. The man states that twenty years ago he had rheumatism.

Practically, in a case like this, you would think of three parts of the body as the seat of the disease. You would think of the lungs, of the arteries, and of the kidneys. Of disease of the arteries there is no evidence. There is only a slight degree of emphysema. I believe this is one of those cases, which are very common in private practice, where a chronic nephritis exists, and where the only prominent symptoms are loss of flesh and strength. In these cases the prognosis is very bad. This man may never have any other symptoms excepting those he now has. The loss of flesh and strength will go on and grow worse, and unless he is cut off by some intercurrent disease he will some day die suddenly. His urine is of good specific gravity now, but it will be found to run lower from day to day, if closely watched. These are the cases of chronic nephritis in which the kidneys become very much diminished in size. As far as treatment goes, it amounts to absolutely nothing. I have never seen them improve under any plan of treatment, nor do I think that climate helps them any. The disease progresses slowly and steadily, and the plan I usually follow is to let them go on and have as good a time as they can for the few years they are likely to live. By that I mean, let the man do as he wants to. If he is actively engaged in business and wants to continue, let him do so; or if he prefers to travel or stay at home, let him. Do not restrict the diet very much. If they feel that they must take medicine, give them the most harmless drug you can think of.

Arsenite of Copper in Bowel Trouble.—Dr. C. E. Bryant, of Denver, Colorado, reports the use of arsenite of copper in over fifty cases of bowel disturbance with entirely satisfactory results. The most stubborn cases showed marked improvement after the second day of treatment.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., DEC. 26, 1891.

Editorial.

THE NEW EDITORIAL STAFF OF THE THERAPEUTIC GAZETTE.

As many readers of the AGE are also readers of the Therapeutic Gazette, it gives the publisher pleasure to announce in these columns a change in the editorial management of the Gazette which it is believed will further extend its usefulness and increase its value to its readers.

The Therapeutic Gazette with January, 1892, begins the sixteenth year of its publication, under the editorial management of a most efficient staff of therapeutic specialists—Hobart Amory Hare, M. D., George E. de Schweinitz, M. D., and Edward Martin, M. D.

H. A. Hare, M. D., is Professor of Therapeutics in the Jefferson Medical College; Physician to St. Agnes and the Jefferson College Hospitals and to the Out-patient Department of the Children's Hospital; Consulting Physician to the Franklin Reformatory Home; formerly Clinical Professor of Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania.

Author of a Text-book of Practical Therapeutics; the Fothergillian Prize Essay of the Medical Society of London, 1888; the 4,000 Franc Prize Essay of the Royal Academy of Medicine in Belgium, 1889; the Boylston Prize Essay of Harvard University, 1890; the Fiske Fund Prize Essays of the R. I. Medical Society for 1885 and 1886; the Warren Triennial Prize Essay of the Massachusetts General Hospital and Cartwright Prize Essay for 1889 with Dr. Martin; the Fiske Fund Prize of the R. I. Medical Society for 1890 with Dr. Martin; Editor of a System of Therapeutics in 3 vols. by American and Foreign Authors, 1891; formerly Editor of the Medical News and one of the editors of the University Magazine; Secretary of the Pharmacopœial Convention of 1890.

George E. de Schweinitz, M. D., is Professor of Ophthalmology in the Philadelphia Polyclinic; Ophthalmic Surgeon to Children's Hospital and to the Philadelphia Hospital; Ophthalmologist to the Orthopædic Hospital and Infirmary for Nervous Diseases; Lecturer on Medical Ophthalmoscopy, University of Pennsylvania, etc.; Author of a Handbook of Ophthalmic Practice, 1891; formerly one of the editors of the University Medical Magazine.

Edward Martin, M.D., is Clinical Professor of Genito-Urinary Diseases in the University of Pennsylvania; Surgeon to the Howard Hospital; Assistant Surgeon to the University Hospital; Lecturer on Minor Surgery and Demonstrator of Surgery in the University.

Author of Essentials of Surgery; Essentials of Minor Surgery, Bandaging and Venereal Diseases; The Surgical Treatment of Wounds and Obstructions of the Intestines, with H. A. Hare; the Fiske Fund Prize Essay of the R. I. Medical Society, 1890; Studies in Respiration, with H. A. Hare; Warren Triennial Prize Essay of the Massachusetts General Hospital, 1889, and Cartwright Prize Essay of the College of Physicians and Surgeons, New York, 1889; formerly one of the editors of the University Medical Magazine.

Dr. H. A. Hare will be Editor-in-Chief, and his successful experience as a teacher, author, and editor renders him especially fit to fill this position with distinction, and to direct wisely general therapeutic opinions.

Dr. Geo. E. de Schweinitz will have charge of the department of Ophthalmic and Aural Therapeutics. His original work in this field enables him intelligently to guide the reader to the most reliable and modern methods of treatment in this special field.

Dr. Edward Martin will place before the readers of the Gazette the principles and practice of Surgical and Genito-Urinary Therapeutics. Medical students and practitioners are familiar with the contributions to this branch of therapeutics that have been made by this able writer and instructor.

With the combined aid of these progressive original workers, it is expected that the

Therapeutic Gazette will be a complete and helpful reflex of modern therapeutic progress and news—indispensable to all who desire to keep pace with the rapid steps modern medicine and surgery is daily making, and if we may adapt a well-known quotation, a journal not too bright and good for medical human nature's daily food.

THE TREATMENT OF INEBRIETY.

Dipsomania is one of the graver manifestations of nervous exhaustion. The principles that underlie its successful treatment are the same that the treatment of other extreme forms of neurasthenia are based on, viz.: Rest; forced feeding; tonics; proper care after recovery to prevent relapse.

Dr. T. D. Crothers, in answering the question, "Are Inebriates Curable?" in a paper in the Journal of the American Medical Association, Dec. 12th, 1891, summarizes his conclusions as follows:

The drunkard must go into a quarantine, where all the external conditions of life will antagonize his disorder and assist nature to return to health. In a quarantine station or special asylum, the diet, baths, exercise, medical study, and care, with all other means, can be applied with military exactness. Each special phase of disease and form of degeneration can be treated from its particular symptoms with particular remedies. Nerve and brain rest, the restoration of all the organic and functional activities, can be obtained by means under the care of the medical man. Thus the drink impulse is overcome and dies away with the increasing vigor of the mind and body. Like insanity, drunkenness is cured, not by drugs alone, but by building up the body through all the avenues of nutrition, healthful exercise, regulated mental and physical surroundings, and appropriate drugs. Drunkenness must be recognized as a disease legally, and the victim forced into conditions where he can live along the best sanitary lines of health, where medical treatment and control can be exact and perfect, and where physiological and hygienic training in its broadest and best sense can be applied.

The scientific methods of curing drunkenness may be stated as follows: First, legislate for their legal control; then organize industrial hospitals in the vicinity of all large towns and cities. Tax the spirit traffic to build and maintain such places, just as all corporations are made responsible for all the accidents and evils which grow out of them. Arrest and commit all drunkards to such hospitals for an indefinite time, depending on the restoration of the patients; also commit all persons who use spirits to excess and imperil their own and the lives of others. Put them under exact military, medical, and hygienic care, where all the conditions and circumstances of life and living can be regulated and controlled. Make them self-supporting as far as it is possible, and let this treatment be continued for years if necessary. The recent cases will become cured, and the incurable will be protected from themselves and others and made both useful and self-supporting. Who can fully estimate the benefits to society, to morals, and to civilization, by promptly isolating such persons and keeping them in normal states of living? Who can estimate the relief to the taxpayer by the removal of the perils to both property and life from drunkenness? This is not a theory, but a reality, only awaiting practical demonstration when the superstitious opposition of public opinion dies away. The time has come to look at this problem in its true light.

The curability of the inebriate is far more certain than that of the insane. The liberty of both is equally dangerous; one is recognized, the other is seldom restrained until he becomes a criminal. The moment a man becomes a drunkard he forfeits all rights to liberty and becomes a ward of the State, and should be controlled by it. It is dense ignorance that permits any one to destroy his life and property by drink on the supposition that he is a free moral agent. The inebriate is mentally and physically sick, and needs the same help as the insane, and the question of care is simply one of adequate means and remedies to reach the disease.

CURRENT TOPICS.

Among topics of interest which we find perennially cropping up among our medical contemporaries are three which will ever

afford food for discussion. Is Medicine a Profession or a Trade? Are Interviews with Physicians Reported in the Public Press Professional? Should the Physician Work on Sunday?

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The editor of the Texas Health Journal offers this advice as to the solution of the first question, which is practically to reduce the supply of doctors:

The whole substratum of the practice of medicine seems to be permeated with elements closely akin to the common trades. Watch the physicians in the highest stations of life; scrutinize their every act; interpret, with acuity, though fairness, their conduct and then compare results with the ideal physician. What is the remedy? None that we know of. We are all human. Of prevention, however, there is much. Convert the medical colleges, three-fourths of them at least, into warehouses for agricultural and manufactured products and let them be filled by the industry of the almost numberless army of medical students. This would bring property to the country; peace, plenty and happiness to the horde of hungry and unworthy young fellows who seek honors they cannot sustain. This done, the dignity of the profession would rise to where it belongs. The laity would then be enabled to appreciate a physician; he would no longer be a common "medico" but would command the respect due him.

We look for relief by discouraging young men, of limited education and means, from undertaking the study of medicine; at the same time they should be helped to enter industrial schools, where they may, if meritorious, distinguish themselves by becoming promoters of worthy and valuable enterprises. This would deplete the medical ranks and largely destroy the "trade" aspect of the present practice of medicine. In no less manner would it bring the greatest blessings of God on those who are doomed to a life of struggle and ceaseless turmoil.

Young man, do not read medicine unless it is an established fact that you are the brightest, most intelligent and promising boy within your range of acquaintance. Once you have ascertained this fact, you will be too wise to ever undertake a profession so full of empty honors and so crowded with poverty, struggles and heartaches.

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The editor of the Lancet and Clinic expresses his opinion as to the necessity of defining more clearly than is done at present the duty of the physician on the subject of interviews for publication in the public press.

There would seem to be no good reason why medical men may not set forth their views on such topics in the shape of interviews or articles in the public press. The various questions of hygiene and prophylaxis, of the proper care of defectives and criminal delinquents, of epidemics and contagion, are directly related to the physician's work, and also of great interest to the public. If a physician chooses to give to the public an impersonal presentation of such subjects, we cannot see that there is any valid reason for criticising his action in so doing. The spirit of the code of honor, or ethics, under which we operate, is such, however, as to prohibit any self-aggrandizement thereby. Its modesty, dignity, conservatism, and spirit of justice require that the ego should be kept in the background, that advancement should depend upon merit alone, and that the critics determining this merit should be those competent to decide it. Out of this grows the prohibition of the adjudication of medical subjects by the public. It is reprehensible in a physician to give in an interview an impression that he has methods of treating disease superior to those of his competitors, or to make a display of his equipment therefor to those not competent to judge of its efficacy. The same object is found in each case, viz: not the edification of the public in matters essential to their protection, but the elevation of the physician into a position before the public unmerited by his attainments.

Every physician who permits an interview takes his professional reputation in his own hand, and should be held responsible for the misuse which the reporter makes of it.

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The editor of the Toledo Medical and Surgical Reporter preaches a brief sermon on the necessity of doctors resting on the sabbath.

"Seven days shalt thou labor and do all thy work," is, whatever else may be said of it, in harmony with all that is known of physiology.

Operations are frequently set for Sunday in order that the time of the patient's friends may not be taken from their weekday occupations; the physician sacrificing his own comfort and health to their convenience, lest he offend them and lose their patronage.

That physicians need the day for rest as much as any one will not be denied, neither are they exceptions to the rule that better work can be done by resting one day in seven, which is the same as saying that unnecessary work is harmful to the physician both physically and professionally.

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The editor of the Medical News calls attention to a too frequent want of recognition of idiosyncrasy as a factor in the etiology and treatment of disease.

Thus shell-fish, crabs, lobsters, clams, mussels, strawberries will produce cholera-morbus in many persons. Meat of any kind will in some persons produce violent pain, nausea, and vomiting. Vinegar will in certain patients cause cholera-morbus, and in others salad-oil will result in a cutaneous eruption all over the body. One person will be mercurialized by a grain of blue mass, while another will take ten grains every day for a week without symptoms. One-thirtieth of a grain of morphine will sometimes produce decided physiological effects in some patients: in one acting as a hypnotic, in another as a stimulant. Five grains of potassium iodide have been sufficient to bring a patient to death's door. Toxic symptoms have been caused by $\frac{1}{400}$ of a grain of conine hydrobromate. A case has been reported in which enormous swelling of the tongue followed small doses of analgesin. Hargens had a patient who was repeatedly salivated by small doses of opium; Werner reports a patient in whom violent emesis always followed the administration of the drug, and in Gaubius' patient it produced a general desquamation of the epidermis.

If one seek for a satisfying explanation of the phenomena of idiosyncrasy in the books, he will seek in vain.

Book Notices.

THE MODERN TREATMENT OF HIP DISEASE. By C. F. Stillman, M. Sc., M. D. 118 pages. Price: Paper, 25 cents; cloth, 50 cents. Physicians' Leisure Library, published by George S. Davis, Detroit, Mich. 1891.

This latest addition to the Physicians' Leisure Library is fully up the high standard established by its forerunners in the series, and its complete and clear treatment of the management of chronic articular ostitis of the hip involves its hearty greeting alike by practitioners and medical students. The book has been prepared with entire absence of prejudice and with the sole idea of giving in compact, yet complete form the latest methods of treatment of the disease. The treatments of Drs. H. O. Thomas, De F. Willard, E. J. Chance, Bernard Barton, E. A. Andrews, Louis Bauer, C. F. Taylor, L. A. Sayre, N. M. Shaffer, M. J. Roberts, R. W. Lovett, A. B. Judson, A. M. Phelps, and W. Blanchard are fully presented, and take precedence of that adopted by the author, with which the book concludes. It is an impartial and complete resumé, copiously illustrated, of current modes of treating hip disease, and, as such, will not have to wait for professional recognition of its value.

A B C OF THE SWEDISH SYSTEM OF EDUCATIONAL GYMNASTICS. A Practical Hand-book for School Teachers and the Home. By Hartvig Nissen. With 77 illustrations and 107 pages. Price, 75 cents net. F. A. Davis, publisher; Philadelphia and London.

Impressed with the unpractical nature of extant treatises on Swedish gymnastics, and convinced of the need of a thoroughly practical hand-book of plain terms and easily understood directions, the author, a teacher of gymnastics for many years, offers this little book to fill the void. Prescriptions of exercises are given for children of different ages, from the third class in primary schools to the first class in grammar schools, and if there should be any doubt as to the correct interpretation of the very lucid instructions, the numerous and self-explaining illustrations come to the rescue. It is so simple and explicit in its language and so thorough in its scope that it will doubtless be a great favorite with gymnastic instructors.

MINOR SURGERY AND BANDAGING. Including the Treatment of Fractures and Dislocations, Tracheotomy, Intubation of the Larynx, Ligation of Arteries, and Amputations. By Henry R. Wharton, M. D. With 403 illustrations and 497 pages. Price, $3.00. Published by Lea, Brothers & Company, Philadelphia. 1891.

The surgical dressings, bandages, and minor procedures employed by surgeons to-day are presented in this book concisely and yet with satisfactory completeness. Great aid to a thorough understanding of the text is furnished by the numerous and artistic illustrations, those accompanying the articles on Bandaging and the Dressing of Fractures and Dislocation being to a large extent new and especially clear. While the work is avowedly published in the interest of the medical student, it will undoubtedly be in large demand by practitioners generally.

ESSENTIALS OF PHYSIOLOGY, Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine. By H. A. Hare, B. Sc., M. D. Third edition, revised and enlarged. Illustrated. 193 pages. Price, $1.00 net. Published by W. B. Saunders, 913 Walnut Street, Philadelphia. 1891.

This is No. 1 of Saunders' Question-Compends, and that it is fully up to the high standard of the series as a whole is evinced by the call for this third edition. The special feature of this edition is the introduction of nine handsome and valuable plates from Arnold's "Icones Nervorum Capitis." Study of the anatomy and physiology of the cranial nerves will be greatly facilitated by the use of this exceptionally lucid and useful work.

HISTORY OF CIRCUMCISION FROM THE EARLIEST TIMES TO THE PRESENT. Moral and Physical Reasons for its Performance, with a History of Eunuchism, Hermaphroditism, etc., and of the Different Operations Practiced upon the Prepuce. By P. C. Remondino, M. D. 346 pages. Price: Cloth, $1.25, net; paper, 50 cents, net. Published by F. A. Davis, Philadelphia and London. 1891.

The book deals very fully and exhaustively of the operation of circumcision from historical, hygienic, and operative standpoints. The operative chapter, wherein all the procedures, simple and elaborate, are reviewed, and the subject of after-dressings fully treated, is of special professional value, while the work, as a whole, is of very considerable interest to the general reader.

A COMPEND OF HUMAN PHYSIOLOGY. Especially adapted for the use of medical students. By Albert P. Brubaker, A.M., M.D. Sixth edition, revised and improved, with new illustrations and table of physiological constants. 195 pages. Cloth, $1; interleaved for notes, $1.25. Blakiston, Son & Company, 1012 Walnut street, Philadelphia. 1891.

The sixth edition of No. 4 in the series of Quiz-Compends contains some 15 pages of added matter, new illustrations, and a table of physiological constants. The popularity of this admirable physiological compend is evidenced in the number of editions already called for, and students extend a hearty greeting to it in its latest and most complete form.

A TREATISE ON PRACTICAL ANATOMY. For Students of Anatomy and Surgery. By Henry C. Boenning, M. D. With 198 wood engravings and 481 pages. Published by F. A. Davis, Philadelphia and London. 1891.

Dr. Boenning's long experience in practical work and the many years he has been engaged in teaching combine to make this text book of especial value. Copiously and clearly illustrated, it is fully abreast of the most recent developments in the science of anatomy. Drs. T. S. Heineken, of New Jersey, and E. E. Caspersonn, of Australia, are responsible for the very carefully written and valuable chapter treating of the teeth. The work is a welcome addition to the ranks of professional text books.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR. Including a Sketch of Aural Anatomy and Physiology. By D. B. St. John Roosa, M.D., LL.D. Seventh revised edition. Illustrated. 741 pages. Price: Cloth, $5.50; sheep, $6.50. Published by William Wood & Company, New York. 1891.

This work is a classic in the library of otology, and a new edition of it stands in no need of friendly indorsement. Changes and additions will be noted in this edition, tending to enhance the value of the book, while Dr. Frank N. Lewis has added a new and very complete index.

PTOMAINES, LEUCOMAINES, AND BACTERIAL PROTEIDS, or the Chemical Factors in the Causation of Disease. By Victor C. Vaughan, Ph. D., M. D., and Frederick G. Novy, Sc. D., M. D. Second edition, revised and enlarged. 391 pages. Price, $1.75. Lea, Brothers & Company, Philadelphia. 1891.

This edition of a valued and standard work by recognized authorities on the subjects of which it treats will be very generally welcomed. The latest and best information has been utilized in its preparation. The authors have spared no pains in bringing the work up to date in every particular, and students of bacteriology and all interested in the etiology of disease will be interested by the perusal of this revised edition.

A MANUAL OF VENEREAL DISEASES; Being an Epitome of the Most Approved Treatment. By Everett M. Culver, A. M., M. D., and James R. Hayden, M. D. Illustrated. 294 pages. Published by Lea, Brothers & Company, Philadelphia. 1891.

This is a thoroughly practical hand-book of syphilis, chancroid and gonorrhœa, well illustrated, and exhaustive in its scope. Its authors are two of the most distinguished authorities on venereal disease known to the profession. It is distinctly a "working" book, the practical aspects of venereal troubles being closely adhered to throughout.

ESSENTIALS OF BACTERIOLOGY. Being a concise and systematic introduction to the study of micro-organisms, for the use of students and practitioners. By M. V. Ball, M. D. With 77 illustrations, some colored, and 159 pages. Price, $1. Published by W. B. Saunders, 913 Walnut street, Philadelphia. 1891.

The medical student will find this, No. 20 of Saunders' Question Compends, invaluable as an aid to the intelligent study of practical bacteriology. It is eminently practical in character, theory and obsolete methods being but lightly touched upon, while the results of the latest experiments in the leading laboratories of the world are given in full.

THE PHYSICIANS' VISITING LIST FOR 1892. Forty-first year of publication. P. Blakiston, Son & Company, Philadelphia.

No introduction is needed for this popular and useful little book. It appears in the same neat and handy form as heretofore, and contains all the information embodied in previous issues. In addition is a list of new remedies, prepared expressly for this issue.

Notes and News.

Medical Devotion to Duty.—

It is always gratifying to record instances of duty well and willingly done, and we feel the more satisfaction in doing this when the work recorded is that of medical men. An incident of this kind occurred recently in Staffordshire, when Dr. Wynne, of Eccleshall, while driving to pay a night visit was upset in his carriage and had his arm broken. He persisted, nevertheless, in finishing his journey of six miles, and was able to render valuable service to his dying patient. It is often somewhat loosely asserted that medical men are prone to become case-hardened and unfeeling—and, indeed, it would not be very remarkable if this occasionally happened. The somewhat harassed life of a practitioner affords many opportunities for the exercise of patience and self-denial—qualities by no means the most natural in human nature. Examples of unselfish perseverance like that exhibited by Dr. Wynne—and they are happily not rare in the history of medicine—suffice to prove that the professional character is in this regard not unequal to high achievement.—*Lancet.*

The Telephone for Diagnosis.—

In the case of a child two years and a half old, suffering from membranous croup, intubation was successfully practiced recently by Dr. J. Mount Bleyer, but when he came to remove the tube he found that the tube had entirely disappeared. In the hope that it still remained in the upper air-passages, he resorted to the use of a telephonic test to locate the position of the tube before resorting to tracheotomy, and the result proved very satisfactory. A delicate metallic probe attached by an electric wire, the other end of which terminated in a telephonic receiver, was passed down through the larynx, and as soon as it came in contact with the tube a distinct click was communicated to the ear through the receiver. The exact location having thus been determined, tracheotomy was performed and the tube extracted by Dr. Frederick S. Dennis, and according to the latest accounts the child was doing well. —*Boston Med. and Surg. Jour.*

Surgery of the Brain.—

In a memoir on "Surgical Intervention in Lesions of the Brain," Dr. Laurent believes he can claim: 1. That success follows operation in a certain number of brain lesions. 2. Hydrocephalus can, however, be regarded as incurable in the great majority of cases. 3. Cerebral abscess is frequently cured by operation. 4. Traumatic epilepsy in general justifies trepanning. This is shown to be less effective in Jacksonian epilepsy. 5. As regards tumors, operation is scarcely indicated, excepting for those which are small, well defined, and superficially situated. 6. Excision is the treatment by choice for encephalocele of medium volume. As a general conclusion the author says surgical intervention applied to brain lesions cannot ameliorate in a marked way, or cause to disappear, with rare exceptions, any but those which are superficial and limited.—*Le Scalpel.*

Artificial Eyes Inserted Within a Week After Enucleation.—

It is commonly advised that artificial eyes should not be prescribed until three or more months after enucleation have passed. This period is a sore one for most patients, the appearance of the empty socket or the "black blinder" being equally unpleasant both to the patient and to his friends. Relying on the well-known tolerance of the orbit for foreign bodies, I have in three instances advised the insertion of the shell within a week —once on the fifth day and twice on the sixth. In another case it was put in on the tenth day. All wore the artificial eyes from the first, not only with no inconvenience or bad results, but with entire satisfaction and comfort.—Geo. M. Gould, M. D., in *Medical News.*

Vaccinated Against Snakes.—

Dr. Jacolot, in "Archives of Naval Medicine," states that at Tuxpam, on the Gulf of Mexico, there are men called "Curados de Culebra" (safe from vipers), who may be bitten by venomous snakes without effect, as they have been previously inoculated with the poison of these animals. Jacolot relates, in detail, how these vaccinations are practiced. The patient takes first the bulb of a native plant called "mano del sapo" (toad's hand), a Dorstenia. Then the inoculation is made with the venom-tooth of one of the most poisonous snakes. Dr. Jacolot was at Tuxpam in 1867, and found this preventive inoculation an old practice among the natives of that region.—*The Satellite.*

The Duties of a Practicing Physician.—

It has been decided by the courts in Trinidad that a physician is obliged to respond to each and every call that is made on him for his services, whether he expects to be paid or not, and that indeed it is improper to make any arrangement about the fee beforehand. Furthermore, he must not give up a case without the consent of the patient, even though the latter is not seriously ill, and though other physicians are at near call, and if he does refuse further attendance he may become liable to heavy damages.—*Medical Record*, Dec. 5th, 1891.

A Doctors' Trust.—

It is reported that in Stuttgart, Arkansas, a combination has been made between all the physicians in the county, the object of which is to enforce the payment of bills by the penalty of non-attendance in case of sickness. The combine is composed of eleven doctors, that being the number in the county, who have bound themselves by their professional honor not to visit any sick person who is on a delinquent list, which each doctor keeps, which is to be sent from one physician to another.

Death from Pyæmia as a Result of the Sting of a Fly.—

Paultauf (Wiener Klin. Wochenschr., No. 35, 1891), has recorded the case of a woman 30 years old, who was stung on the right eyelid by a fly. On the following day there was considerable swelling, redness and pain in the right temporal region, with fever, and to these were added cerebral symptoms. On the second day manifestations of collapse appeared, with heart failure; death ensued on the morning of the third day, little more than forty-eight hours after the fly-sting.

The Prevalence of Influenza.—

Abroad, it is reported to be very prevalent in St. Petersburg and Berlin, whilst at Ham-

burg it has reached "alarming proportions," the weekly mortality of the city and its suburbs considerably exceeding the average. In France it is especially prevalent at Bordeaux, where many deaths among the aged have occurred. It has also appeared in Paris and London. It is prevalent also in many sections of this country, and growing more so.

Her Scientific Ally.—

The patient dropped upon his knee
In love's divinest ecstasy;
" Oh, say the word, bewitching nurse,
Whether it bring me bliss or curse.

" For thee my heart is steadfast beating;
Oh, hearken to my fond entreating."
She laughed a wicked little laugh,
And hustled out her sphygmograph.

Then madly up and down the paper,
Obedient to each cardiac caper,
The needle went a-palpitating,
Erratic curves and twists creating.

" Is this thy heart's all steadfast beating?"—
Scorn in her tones with sorrow meeting—
" Go to, thou false-asserting calf;
Thou *canst* not fool my sphygmograph."

—*Tommy Dod.*

Doctors' Wives at Medical Societies.—

At a meeting of the Practitioners' Club, of Chicago, the ladies present were the prominent feature and the subject of discussion, taking a fair share in the entertainment and post-prandial discourse. From their many assertions it would seem that the life of a doctor's wife is full of special cares and deprivations.—*Chicago Med. Recorder.*

A New Form of Laryngeal Mirror.—

Dr. Th. Harke, of Hamburg, describes (Deutsche Med. Wochenschr., No. 28, 1891) a new form of adjustable mirror, readily affixable to a double-stemmed handle, pressure upon the expanded extremities of which will, during its use, slant the mirror to any desired angle from 100 to 180 degrees.

Number of Paris Medical Journals.—

According to the Paris correspondent of the London Lancet, there are published in Paris alone 145 medical journals, besides eight pharmaceutical, while lay publications of all kinds number only 161.

Therapeutic Brevities.

Massage of the Prostate.—Dr. Eberman presents the following conclusions as to the value of massage in prostatic disease: 1. It can be advised (*a*) at the decline of an acute parenchymatous inflammation where there remains difficulty in urination, the gland being still slightly swollen and but little painful; (*b*) when the acute or chronic inflammation terminates in abscess, the massage having for its object the evacuation of the pus and the resorption of the engorgement still present; (*c*) in cases of chronic parenchymatous inflammation with swelling; (*d*) in soft hypertrophy with uniform consistence of the gland. 2. Partial hard myomatous hypertrophy of the gland is not susceptible of massage; however, the massage in this case does no harm, and it can be tried, first introducing a pewter bougie into the urethra. Perhaps if the resorption of the tumor is not effected, the urethra, which has been modified by the irregularities of the hypertrophied prostate, may be again restored to proper calibre. The middle lobe of the hypertrophied prostate encroaches upon the cavity of the bladder, and by reason of its situation cannot be subjected to massage.—*Wratch.*

Hydrastis Canadensis in the Treatment of Night-Sweats in Phthisis.—Dr. Cruse states, in the Internationale Klinische Rundschau, that having occasion to use this drug recently in some cases of hæmoptysis occurring in consumptives, he found that, in addition to the favorable influence on the pulmonary hæmorrhages, the night-sweats, which before had been very distressing, were now entirely prevented. This effect was especially marked in one case in the last stage of phthisis, in which he had for some time been compelled to the almost continuous employment of hydrastis for pulmonary hæmorrhages, and in whom the night-sweats were by this treatment entirely arrested. The author also refers to several other cases in which atropine, agaracine, sulphonal and ergot had only at first given some relief and afterwards proved inefficacious, and in which he had resorted to the hydrastis, giving 30 drops each evening of the fluid extract. In all great relief of the night-sweats was obtained.—*Therapeutic Gazette.*

The Iodides of Analgesin.—In the Bulletin Général de Thérapeutique for 1891, p. 158, M. Duroy gives a most interesting account of his researches concerning two new organic

iodides, the iodides of analgesin. Dating his investigations upon the antiseptic properties of the iodides from 1853, he believes he has now found a combination superior to those previously known. The proto- and biniodides of analgesin are pleasant to the taste, and yet in solution prevent the putrefaction of meat, which the iodides of potash and soda do not. Doses of six to nine grains *per diem* are borne without any inconvenience. The proto-iodide appears suited to such conditions as tuberculosis, and glandular enlargements, while the more powerful biniodide should be used in typhoid fever, diphtheria, organic diseases of the alimentary canal, and epidemic diseases. These iodides can be administered in wafers, or rubbed up with sugar, or even placed dry upon the tongue.

Camphorated Salol in Middle-Ear Suppuration.—Dr. Pégon reports in the Revue de Thérapeutique some very favorable experiences with camphorated salol in the treatment of suppurative disease of the middle-ear. Camphorated salol is a thick, colorless, unctuous liquid, soluble in ether, chloroform, or oil, but insoluble in water. Light and air decompose it rapidly. Its application is neither painful nor irritating, and it seems to possess the property of rapidly curing a distressing and very intractable disease. It is applied upon a small pledget or tampon of cotton-wool; to this may be attached a fine thread by which the patient can remove it after twenty-four hours. The ear should previously be washed out with a weak boric-acid solution, and the washing should be repeated once or twice daily when the tampon is not in position.

Therapeutic Application of Ovarian Juice.—In the Archives de Physiologie Normale et Pathologique, Professor Brown-Séquard continues his record of experiences with testicular juice, and adds some novel reports upon the use of injections of watery extracts of the ovaries in women. An American lady has been carrying on experiments with the ovarian injections with great perseverance and success. She used the ovaries of rabbits, and prepared and used the extract in the same way as was done with testicles. Experiments were made upon more that a dozen female patients suffering from debility, insomnia, and uterine troubles. She observed return of strength, relief of insomnia, cessation of hysterical attacks, and in one old lady, who had lost her singing voice, a complete return of vocal power!

Peroxide of Hydrogen as a Cosmetic.—Peroxide of hydrogen will make imperceptible a dark downy growth on the face where the hairs are numerous and fine and electrolysis is not applicable.

The application should be made several times a day by a camel's hair brush until the hairs are thoroughly whitened, and after that as often as is necessary to maintain the color.

As a preliminary measure it is well to wash the growth with a solution of powdered borax in water, to remove the grease which adheres to every hair.

Hypodermatic Use of Ergot.—In the Therapeutische Monatshefte for 1891, Heft 7, S. 369, Dr. Biedert gives us a method for using ergotin subcutaneously without danger of producing either indurations or abscesses. He dissolves the extract of ergot in a 2 per cent. watery solution of carbolic acid. In the intervals between the injections the syringe remains filled with a 3 to 5 per cent. solution of carbolic acid, the needles being kept in a similar solution. At the time of the injection the site selected is cleansed with cotton moistened with the carbolic solution, and the point of puncture covered by a second pledget of cotton dipped in the same solution.

Subcutaneous Injections of Strychnine in Ten Cases of Chronic Alcoholism.—Dr. Ergloski has published an account of ten cases of chronic alcoholism among his patients. They had the habit of taking brandy. They were given subcutaneous injections of nitrate of strychnine, and one-sixtieth to one-twentieth of a grain at each injection. After a dozen injections the results were remarkable, as they all acquired a distaste for brandy. In such cases as are desirous of being cured this treatment may prove to be of assistance. *Boston Med. and Surg. Jour.*

Hydrogen Peroxide in Diphtheria. — Dr. W. Taylor reports two cases in which the local application of this agent was of service. It can be used full strength, but it is best to dilute it 25 per cent. with water (3:1). It may be applied to the part with a brush (Japanese pencil), but it is better to use an atomizer. The membrane will re-form and the application must be repeated, but by its diligent and perseverant use the formation of the diphtheritic membrane can be kept well under control.

A New Remedy for Rheumatism. – According to the Lyon Médical, October 25th, 1891, Dr. Betchine, of St. Petersburg, has made special studies in reference to *ephedra vulgaris*, a plant much esteemed by Russian peasants for its anti-rheumatic qualities. The bark and the root the observer found efficacious in acute articular rheumatism with high fever. In chronic rheumatism its most favorable action was merely a slight temporary amelioration. Unless fever is present the drug is not especially useful.

Codein and Hyoscine in Paralysis Agitans.— Dr. Frederick Peterson publishes a clinical study of forty-seven cases of this disease. In the majority of his cases it developed between the ages of fifty and sixty, more men being affected that women. Codein in doses of two grains, combined with hydrobromate of hyoscine, doses of 1-100 of a grain, is recommended to be given two or three times a day.

Iodide of Potassium for Hives. — H. E. Stroud, M. D., writes the Med. World: I should like to suggest that when salines, internally or locally, fail to remove the tendency to hives, iodide of potassium is the remedy. Commence with five grains three times a day and increase to slight coryza, and give what can be borne short of this condition.

For Gas Asphyxia.—In a case of asphyxia from the inhalation of illuminating gas, Hoffman (Allgem. Med. Ztg.) succeeded in relieving the symptoms by the subcutaneous administration of nitro-glycerin in doses of a hundredth of a grain. The injection was made in the præcordial region, and was followed by marvelously prompt results.

Formula for Hives.—Dr. J. J. Liggett commends the following in the Med. World:

℞ Potassii iodidi, ʒ v.
Vini colchici sem., ℥ j.
Tr. cimicifuga rac., ℥ ij.
Tr. stramon., ℥ ss.
Tr. opii. camph., ℥ iss.

M. Sig.—From gtt. xv to ʒ j, three times a day.

Oil of Wintergreen in Gonorrhœa.—Dr. J. A. Wyeth has obtained good results in gonorrhœa by the administration of oil of wintergreen in doses of six drops three times a day.

Medical Progress.

Syrup of Hydriodic Acid—A Study of Its Therapeutic Action.—Hydriodic acid is formed by the reaction of sulphuretted hydrogen on iodine in water, the hydrogen leaving the sulphur to attach itself to the iodine, while the sulphur falls to the bottom as a fine powder. A small quantity of iodine is at first changed into the acid, and this in turn dissolves more of the iodine, and prevents the sulphur from interfering with the process. The chemical reaction, when sulphuretted hydrogen is passed through a solution of iodine, is

$$\underset{\text{Iodine}}{4\ I} + \underset{\substack{\text{Sulph.}\\\text{Hydrogen}}}{2\ H_2S} = \underset{\substack{\text{Hydriodic}\\\text{Acid}}}{4\ HI} + \underset{\text{Sulphur}}{2\ S}.$$

To prepare the syrup, filter the resulting liquid, and evaporate at a low temperature until all odor of the H_2S is gone; then add sugar to form a syrup, and, if desired, flavor with tincture of orange peel.

Hydriodic acid is a colorless, irrespirable, and non-inflammable gas, with an odor like that of muriatic acid. Its aqueous solution has a strong acid reaction, and a sour styptic taste, which does not exist in the properly prepared syrup.

Dissatisfied with the unstable nature of the solution of hydriodic acid, Murdoch, in 1855, devised and suggested a thick syrup preparation. In the older forms of the acid, prepared after the method of Dr. Buchanan, of Glasgow, each fluid drachm was supposed to contain 5 grains of the iodine, and more or less free cream of tartar: and from being at first a clear fluid, it changed after a short period of keeping to a light, then darkening amber color, and finally with the liberation of its iodine it presented a bright red or garnet coloration,—the taste of the iodine increasing with the intensity of the shade.

The syrup still frequently presents this change of color, so that conscientious physicians hesitate to prescribe—as should the pharmacists to dispense—it. To avoid the dangers concurrent with this change of colors, the Scotch physician began, on theoretical grounds, to administer iodine combined with starch, which he supposed would yield sufficient hydrogen during the process of digestion to unite with the iodine: but he finally settled on administering the syrup already prepared, finding that the iodine, pure or in tincture, was too irritating, and the effect of the remedy depended on its conversion into the hydriodic acid before it could enter the circulation. He commenced with a small dose of a few drops, gradually

increasing to one teaspoonful, and finally to a tablespoonful, three times a day,—the largest dose aggregating 5 grains to the fluid drachm—as much as 60 grains of pure iodine each day. This we would hardly be heroic enough to venture on in our day.

The syrup should have a specific gravity of 1.300, and each ounce should represent 6.67 grains of the pure hydriodic acid. In a good preparation we should find no free iodine, and no unpleasant taste; these advantages permit more latitude in our dosage than with the plain tincture, or with Lugol's solution. Very little attention is paid in our text-books to the action of hydriodic acid,—probably because of its unstable condition; but in the form of syrup its use is becoming more general, as thus it yields the therapeutic effects of pure iodine, without offending through the disgusting taste of the base, or through the irritation caused to the throat and stomach by the iodides; and it meets more indications in treating the many affections for which the iodine preparations are suitable than will any other form of the drug with which we are acquainted. The syrup is just as readily absorbed into the system, and its regular use can be longer continued without developing disgust than either the tincture or the iodides themselves. It has the advantage of being tasteless, and is not unsightly like the tincture. We hear a good deal of the so-called colorless tinctures of iodine, but we must not overlook the fact that the ammonium in one removes the color by forming iodide of ammonium,—an irritant,—while the sodium sulphite addition forms merely a solution of the sodium sulphite, which for active use disappoints both patient and physician.

A serious drawback to the administration of all iodine preparations is the idiosyncrasy of some persons to *iodism*, evinced, sometimes after only a few doses, by swelling about the eyes, irritation of—and flow of a watery fluid from—the cells of the frontal sinus and the Schneiderian membrane, and profuse salivation in some cases, all simulating closely the influenza, or the annoying sniffling and flow of water from the nose. Another untoward effect is the irritation of the stomach, which is induced in most persons by taking of any iodides, especially of iodide of potassium—lately indicated in large doses against asthma—and sodium iodide, which is often administered to persons who are unable to take the potassium iodide. The writer knows of no single case where these adverse symptoms occurred from the administration of the hydriodic acid syrup (Scherff's).

Among the diseases in which we may expect to derive benefit from the syrup, may be named the spasmodic seizures of asthma and whooping-cough; it allays the nervous spasm and contraction of the bronchi, so distressing in these diseases, besides favoring "the bringing up," as it is termed, of the bronchial secretion in asthma, the flow of which, once promoted, alleviates greatly the distress of the patient. Then, too, in the resulting consolidation of pneumonia and of the fibrous hardening around tubercular deposits in phthisis, and in the bronchorrhœa of old people it affords much relief, enabling them to expel the thickened mucous and often purulent secretions, which plug up the finer bronchial tubes. In scrofula, in scrofulous ophthalmia, in lymphatic enlargements of the glands of the neck and groin, in syphilis in all its later forms, in goitre, in rheumatism, both acute and chronic, and in many chronic skin affections it is applicable to greatest advantage.

Food can readily be allowed while we seek to promote absorption by the iodine preparations which are least irritant, so as to maintain the strength of the patient while we are getting rid of the morbid inflammatory structures; this applies to the treatment of obesity, of course restricting the patient to a moderate use of fluids of all sorts and to a minimum of highly carbonaceous food, though these restrictions are less stringent than required in the Banting system. Here the rationale is not so much *necessitating* the body to live on its own component parts, as in the absorbent property imported to the lymphatics by the agency of the iodine. The same effect can be reached by large and continued doses of the iodides of potassium and sodium; but with these we find by the time the reduction is effected—literally a *reductio ad absurdum*—that the individual presents the senile appearance of an old body on young legs; in the action of the syrup of hydriodic acid we find health, with breathing and circulation improving, while the actual fatty tissues of the body become less, as explained by Prof. Vogel, "from the incessant chemical changes of integral molecules of the body." A similar idea was once held as to the action of soap in reducing flesh, until the public found what they were taking; the plan then lost favor.

Goitre may be conveniently treated by continuous doses of the syrup, with or without the tincture of strophanthus, giving the medicine after meals so as to admit of prolonged administration. Fowler's solution, or the liquor acidi arseniosi, makes with the syrup a pleasant mixture, and may be taken

by delicate stomachs, say 5 drops of the arsenical solution to each drachm of the syrup, freely diluted, after meals, until we obtain the specific action of the metal, which shows itself long before we secure the iodine action.

In chronic skin diseases and in secondary syphilis this combination is just what we need, taken in some tonic tincture or infusion, and kept up until the *full constitutional* action of both drugs is experienced.

We may employ the syrup of hydriodic acid usefully in affections which we ascribe to reflex irritation, as in whooping-cough, asthma, and in coughs kept up by bronchial or laryngeal irritation; but the writer has found more decided effects in whooping-cough and asthma than in other troubles.

During and after bronchitis and pneumonia its action in closing up the remaining fibrous exudations is often wonderful, and this is *all important;* not only in the removal of the pneumonic inflammation then present, but, after the theory of Neimeyer, in eliminating the fibrous exudated material which goes far to kindle up tubercular infiltration in the part.

The syrup of hydriodic acid may be readily combined wilh most cough mixtures, the ipecac preparations, with cough liquorice mixture, with wine of tar, with tincture of lobelia, the deodorised tincture of opium; with McMunn's Elixir, with senega and blood root tincture, tinctures of valerian and belladonna, the fluid extracts of grindelia and gelsemium, with chloroform, with cod-liver oil emulsions, and with purified petroleum, which is now being much uséd in place of cod-liver oil.

Dr. Horkin, of Belfast, thinks that rheumatism is a form of endocarditis, and that this condition is *always* present in acute rheumatism but not always recognizable in its early stages, and that its presence should be *always* presumed and provided for by appropriate treatment. He uses a blister plaster (small, say 2½ and 4) over the heart, allowing it to draw *fully*, and repeating at *short intervals;* then the syrup of hydriodic acid is freely administered with good effect.

With the fluid extract of grindelia we have a valuable combination for asthma, while the syrup given in the infusion of castanea vesca, or the leaves of the common chestnut, offers really a valuable remedy in whooping-cough. With Scherff's Syrup, which the writer has mostly prescribed, the ingredients are so stable that a solution of starch brings out no blue color. This preparation has kept well in the writer's hands, though subjected to critical tests and conditions under which other syrups have not fared as well.—A. Atkinson, M.D., in *Notes on New Remedies.*

The Treatment of Accidents During Ether and Chloroform Anæsthesia.—The wonderful advances made in surgery in recent times has so broadened its field of usefulness that operations have naturally multiplied, and ether and chloroform anæsthesia has become correspondingly common.

That the condition of anæsthesia is not free from danger, medical literature well attests. Every one who administers an anæsthetic should, therefore, be familiar with the signs of danger, and the means to be employed, should any emergency occur.

The time-honored precept that the anæsthetizer should give his undivided attention to the condition of the patient cannot be too often repeated. When accidents do occur, they are apt to be sudden—especially does this seem to be the case during chloroform anæsthesia—and a moment's forgetfulness or a brief period of attention to the operation may be disastrous to the patient.

As spasm of the muscular system and collection of mucus in the throat of the patient are apt to occur, in early stages of anæsthesia, accompanied by irregular, jerky and abortive respiratory efforts and marked cyanosis, much unnecessary anxiety may be avoided if the surgeon always assures himself that there is nothing loose in the mouth of the patient before administering the anæsthetic.

Unfortunately, ether and chloroform do not always cause death in the same manner, so that there is no one symptom, attention to which will give entire security. The experiments of Professor H. C. Wood, conducted in the laboratory of experimental therapeutics of the University of Pennsylvania, seem to show, certainly, that during etherization any untoward action is most apt to be upon the respiration. Therefore, as long as the respirations are full and regular, and the color good, we would expect the patient's condition to be entirely satisfactory. This applies, however, to healthy patients only. When ether is administered to a patient whose heart is diseased, or whose vitality is reduced by some long and wasting illness, attention to the pulse becomes essential.

On the other hand, the observations above referred to have as certainly shown that during chloroform anæsthesia the violence of the drug is most apt to be spent upon the heart. Here, therefore, the closest attention to the circulation is necessary. Constant

observation of the respiration is also essential.

It should be a rule, during anæsthesia, to watch both the respiration and the circulation. The color of the face is a valuable guide. Cyanosis, indicating feeble respiration or obstruction of the respiratory tract, and pallor should lead at once to an investigation of the condition of the circulation. Efforts at vomiting are to be overcome by pushing the anæsthetic. If vomiting occurs, the head is to be turned to either side so that the ejecta may not be inspired. Stertorous breathing indicates profound anæsthesia, and it is desirable to keep within this limit. Paralysis of the diaphragm also indicates that the anæsthetic has been pushed too far.

During normal inspiration the diaphragm descends, pushing down the intestines and distending the abdomen. When anæsthesia has been carried too far, the action is reversed, the diaphragm is paralyzed and hangs helpless. With each inspiration it is drawn up into the thorax, and the abdomen retracts. When this occurs, the ether is to be withdrawn, until the normal action is restored. This most valuable observation was first pointed out by Drs. H. A. Hare and Edward Martin (University Medical Magazine, Vol. II, p. 57). Wide dilatation of the pupil also demands immediate withdrawal of the ether.

Should the respiration show evidences of failing, what shall be done? The anæsthetic is to be instantly removed; the tongue is to be brought well forward, and the throat is to be cleared of mucus or other obstruction; the head is then to be extended and the fingers hooked behind the angle of the lower jaw, which is to be brought well forward. This raises the epiglottis. This method is an improvement on that proposed by Howard, which consists in bringing the patient's head over the end of the operating table until it swings free, when it is carried backward and downward, until the utmost possible extension of head and neck is obtained. If voluntary respiration does not begin at once, some external stimulus is to be used. One always at hand is that pointed out by Hare (University Medical Magazine, Vol. I, p. 105), of baring the abdomen of the patient and dashing a quantity of ether upon it. The rapid evaporation which follows produces a degree of cold, the shock of which frequently excites a deep inspiration. If a battery is at hand, peripheral stimulation may be produced by this means, and most effectively by the brush. The sponge electrode may be placed on any indifferent point of the body, and the brush on the epigastrium. This may be repeated as frequently as it is desired to produce respirations, until the normal respiratory action is established. Attempts to affect the diaphragm by stimulating the phrenic nerve may cause cardiac inhibition, as pointed out by Hare and Martin (*loc. cit.*). In well-appointed clinics a battery, with the brush attached, is always set up in readiness for use at a second's warning. These means failing, artificial respiration is to be practiced without delay, preferably by the Sylvester method. If the appliances are at hand, the method of forced artificial respiration, as recommended by Prof. Wood, is to be strongly advised. For this purpose, a pair of bellows, some rubber tubing, a face-mask and a tracheal canula are needed. The apparatus can now be procured of instrument-makers. The experiments of Wood have shown that the only respiratory stimulant worthy of mention is strychnine. In a stubborn case, the best results will follow prolonged careful efforts at artificial respiration. Ether is eliminated principally by the lungs; the expirations of the patient under ether being heavily charged with its fumes. If, therefore, full, deep respirations are induced, and an abundance of fresh air supplied, the quantity of the drug in the body will be rapidly reduced.

If the circulation shows signs of failing, the anæsthetic should be stopped, and the same precautions looking to a free supply of fresh air are to be observed. A hypodermic injection of the tincture of digitalis may be administered at once. In the experiments just noted, no other drug was found to have a constant beneficial effect upon the heart. The action of ammonia is very evanescent. The hypodermic use of ether or alcohol in a patient whose blood is already saturated with ether vapor is as irrational as it is futile. Artificial respiration promises a great deal also. Wood has resuscitated animals by this means alone after the respiration and the circulation had both ceased.

These various measures are to be employed, one after the other, more quickly perhaps than they could be described, and efforts are not to be relaxed while waiting for a certain article, but that means which is at hand is to be used until what is desired has arrived.—*University Medical Magazine*, Dec., 1891.

The Treatment of Pneumonia by Large Doses of Digitalis.—We have certainly entered a new era in regard to the treatment of one of the most common and dangerous of affections: pneumonia. The

routine practice of blood-letting and the administration of tartar emetic will now be laid aside, to be superseded by a drug that bids fair to become almost a specific in the disease under consideration.

Traube, Wunderlich and others, who first employed digitalis in large doses, noticed good effects, and following the teaching of these investigators, Petresco, and more recently Huchardet, Bardet and Tikl, have tried the drug with most gratifying results. Petresco, more extensively, perhaps, than other observers, has especially investigated the subject, and since he first began to employ the remedy he has entirely abandoned all other therapeutic measures. Before 1883, this author was a confirmed believer in the tartar emetic and blood-letting treatment; but all this was immediately abandoned after he began to employ large doses of digitalis. Petresco claims that the drug does good not only in infectious croupous pneumonia, but even in broncho-and pleuro-pneumonias. He claims to have cut short the disease by this sole treatment, in from 24 to 48 hours, during which time he has observed an abrupt fall of temperature, from 106.5° F. (the highest seen) to 98°, 96⅘°, and even 95° F., together with a marked reduction of the pulse, which from as high as 140, and even higher, was brought down to 60, 40, 30, and, in one remarkable instance, as low as 24. In the last case the patient fell into a quiet sleep, this being followed by a local and general improvement. The author has compared the results obtained under the action of digitalis with those observed in the treatment by other drugs, such as alcohol, bromide of potassium, caffeine, stropanthus, and also with those offered by the expectant and emetic methods, and finds that, taken all in all, digitalis is far superior in every respect. His statistics are certainly very interesting and fully sustain his assertions. Thus, in 825 cases treated by him since 1883 exclusively by large doses of the drug, he has only had a mortality of 2.06 per cent. Bennet, it will be remembered, obtained, under the tonic treatment, a mortality of 3 per cent. in 129 cases, and a mortality of 6.08 per cent. in 720 cases under the expectant treatment. In the experience of Edinbourg in a record of 698 cases treated by venesection alone, the mortality was 34.05 per cent., which speaks for itself.

Petresco communicated the excellent results obtained by him under the new treatment to the Paris Academy of Medicine in 1888, to the Therapeutic Congress of 1889, and, lastly, to the recent International Medical Congress held at Berlin. Yet, up to a comparatively short time, Petresco had few followers. In November, 1890, Huchardet and Bardet presented to the Société de Therapeutique the results obtained by Chardet in the clinical wards, and by Bardet in the Laboratory from a series of experiments on animals. Both authors agreed that the doses of digitalis should be considerably larger than those generally employed. Petresco has been in the habit of using from 60 to 90 grains a day, in infusion, for three and four days consecutively. With these quantities the author has never noticed untoward effects, such as vomiting, diarrhœa, disturbances of the pulse, and much less collapse.

The latest contribution to the subject is that of Tikl, of Vienna. His results have been most gratifying. This distinguished practitioner has made, up to the present time, 61 carefully studied observations, of which 47 were cases of fibrinous, and 14 of lobular pneumonia. All these cases were exclusively treated with large doses of digitalis. Only one death occurred out of this number, giving, therefore, a mortality of only 1.65 per cent., a gratifyingly low figure. In the whole series of these cases, some disgreeable, but not fatal, symptoms were observed; in two, there was a moderate collapse; in twelve, vomiting; in four, an intermittent pulse; and in a few, slight diarrhœa. These effects, however, disappear on the suspension of the drug, after which the good results come on rapidly. Tikl prescribed, during 24 hours, 3 grammes of the digitalis in 200 grammes of water in the form of infusion. According to the author, digitalis shortens the period of the disease, and causes it to assume a benign character. From the 2d to the 3d, or, at least, the 5th day, the temperature begins to decline, and *pari passu* with this phenomenon there is a gradual decrease in the cardiac rate, together with a marked amelioration of the general condition of the patient.

These observations of Tikl coincide with those of Petresco, and it would seem as if in the use of digitalis, in the quantities indicated, we have a most valuable method for the successful treatment of pneumonia; a method, in fact, superior by far to all others.

Varicose Ulcers of the Legs.—Dr. David Fejér publishes in the Orvosi Hetilap an account of his treatment of ulcerated varicose legs, which has the advantage of not requiring any long confinement of the patient in the recumbent posture. He first cauterizes dirty-looking ulcers, if they are covered merely by a thin layer of pus, with

nitrate of silver, those which are covered by a thick diphtheritic layer being treated with chloride of zinc, while fetid and gangrenous ulcers are destroyed by the actual cautery. According to the application, the dressing is changed in three, five, or ten days, during which time the patient has his legs elevated. Before the dressing is applied, the ulcers and the surrounding skin are washed with water or a sublimate solution of the strength of 1 to 2000. A thin layer of iodoform is then dusted over the ulcers, which are ultimately covered with a mercurial plaster spread, after softening, to the thickness of two millimetres on thin calico cut somewhat larger than the circumference of the ulcers. This is followed by a cotton-wool tampon. The leg is then covered with a thin layer of Brun's cotton-wool, after the skin has been dusted with some innocuous powder. It is convenient to steady the dressing with a gauze bandage, so that the fine flannel bandage which completes the dressing may be easier of application. In some cases the plaster may be followed by an elastic bandage, which is especially appropriate in elephantiasis of the foot and in indurated ulcers, and may be combined with massage of the leg. The best powder for dusting the skin as a prophylactic against eczema is oxide of zinc or bismuth. Massage may even be practiced on the bandaged leg, provided the ulcers have assumed a clean appearance. Under this treatment the patient may walk about in from four to ten days, and may after a few days more attend to his business. He must, however, when resting, always lie down, and even when he is sitting his legs must be in a horizontal position. Another advantage accruing from this treatment is that the dressing does not require changing until after three or four, and later on only at intervals of eight or ten, days; and that even indurated ulcers of long standing are made to heal by this process, provided no destruction of tissue has taken place which cannot anatomically be replaced, and provided also that the patient does not suffer from any serious constitutional affection. Dr. Fejér does not recommend skin-grafting, but prefers to loosen the skin surrounding the ulcer with the knife for a distance of ten centimetres or more, and then to approximate the loosened portions. This must, of course, only be done after the ulcer has been cleansed and after the skin and the connective tissue underneath have become soft, as gangrene would otherwise occur. Some treatment should be continued after the varicose ulcers have healed. Dr. Fejér thinks it sufficient in slight cases for the patient to assume the recumbent posture twice or three times a day for five or ten minutes each time, and to move the leg about while elevated. Persons who cannot spare the time for the above dressing may substitute an elastic stocking, which, however, must be examined every morning *in situ*, and altered according to the decreased size of the leg, as the latter frequently swells during the day while the patient is walking about.—*Lancet*, Nov. 28th, 1891.

Gavage in the Treatment of Persistent Vomiting in Infants.—A paper was read by Dr. Charles G. Kerley, of New York, by invitation. In washing out the stomach for vomiting, the author had observed that after the operation an ounce of warm water would be retained in the stomach, when stimulants largely diluted and foods of various kinds, given by the mouth, within an hour or two would be rejected. It had occurred to him that if water administered through a stomach tube was retained, partially digested food and diluted stimulants might be kept down if given in the same way. Although gavage had been used previously, the reader stated that it had never been employed in persistent vomiting. The method had been employed in twenty cases. The histories of eight cases were read in detail. The apparatus employed was that ordinarily used for stomach-washing, with this exception: Instead of the soft rubber catheter, Pain's No. 1 adult nasal feeding tube was used, which had the advantage of possessing only one "velvet eye," shortening the duration of the operation about one-half, a decided advantage in some cases. The points given for the operation were:

1. The rapid introduction of the tube, and its rapid withdrawal.

2. The posture of the child ought to be a half-reclining one.

3. The quantity of diluted stimulants or predigested food should vary from half an ounce to two ounces and a half every two or three hours.

The reader felt justified in drawing the following conclusions from his experiments:

1. In every case of persistent vomiting in infants not of cerebral origin, gavage should be tried after other measures had failed.

2. It might be resorted to under any circumstances when infants could not or would not take sufficient nourishment.

3. Its application, like stomach-washing, must be limited to infancy, since in children over two years the resistance of the patient made it almost impossible of application.—*New York Medical Journal.*

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